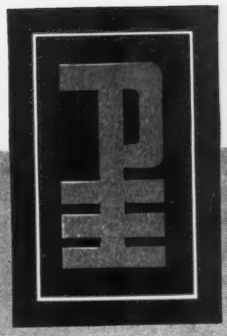
APRIL 1948



Printing Equipment Engineer

the demand for

COLOR

in daily newspaper printing

grows more insistent

— and the new Hoe Color-Convertible is the press that anticipates your color requirements for the years to come.

It's the finest black newspaper press you can buy — PLUS a capacity for expansion that will enable you to keep pace with increasing calls for color.

To provide maximum color flexibility, the press is designed so that a color plate cylinder — as shown — can be imposed whenever desired on any existing impression cylinder of any press unit. This may be used for spot color or to give additional color when running the web from unit to unit for multi-color work. The mechanism required to reverse a pair of cylinders or an entire unit can be readily installed at any time — as also can duo-ink rails.

That this color expansion construction is appreciated by forward-looking publishers, is shown by the number of leading newspaper plants now being equipped with this new Hoe Color-Convertible Newspaper Press.

R. HOE & Co., Inc.

910 East 138th Street, New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

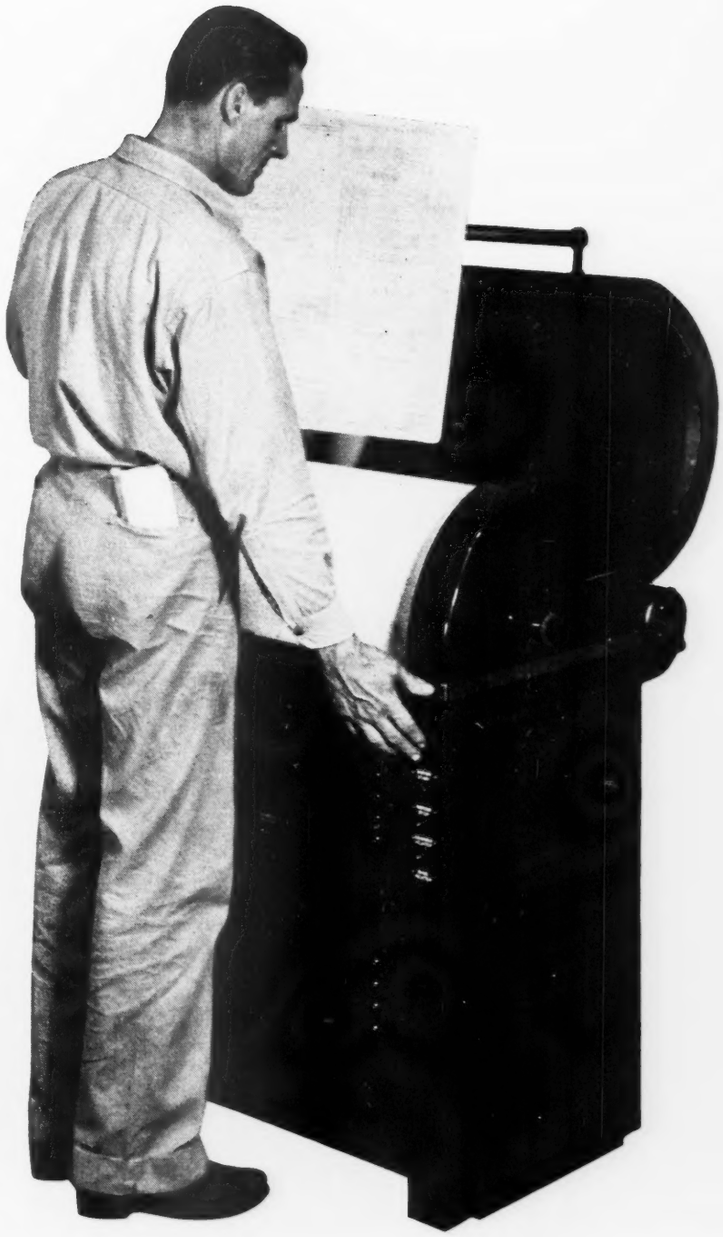
STA-HI SIMPLIFIES STEREOTYPING WITH "PUSH BUTTON ROUTINE"

The important process of forming and electrically baking dry mats for trouble-free plate casting is just about as simple as pushing a button when you use a new Sta-Hi Master Former.

The operator pictured here is pushing the button that starts the electric motor and vacuum pump unit. He will then place the mat in the chamber, close the chamber over the base heater and set the vacuum control.

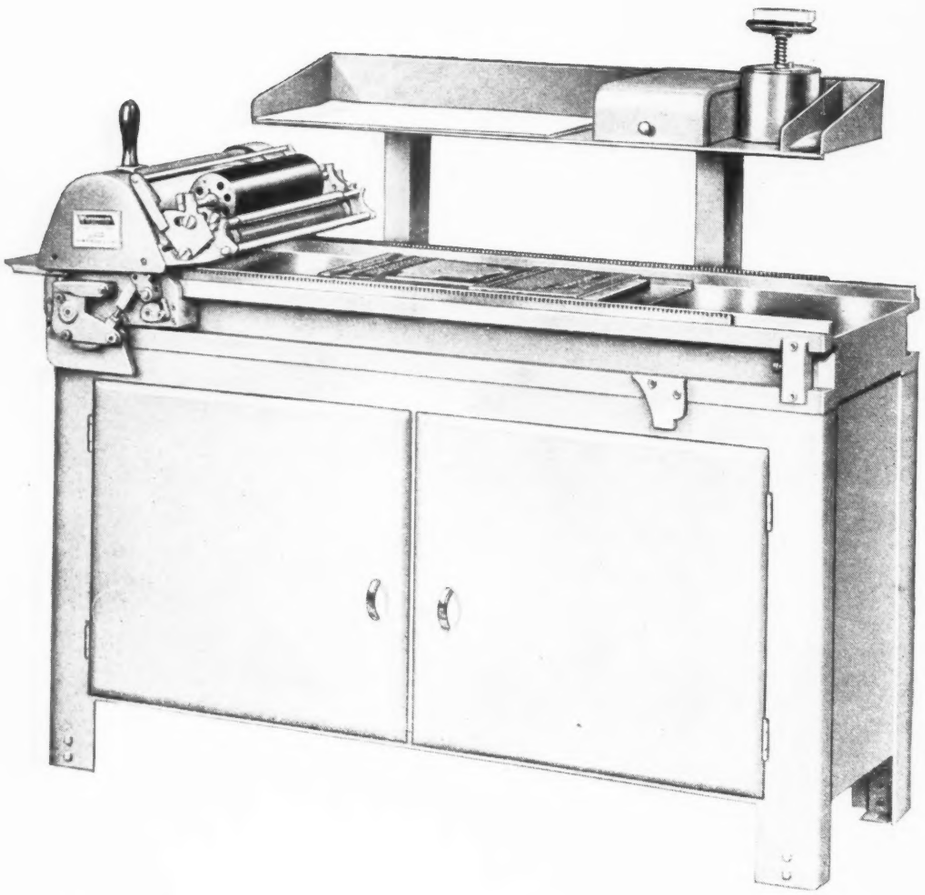
That's all the manual operation required. When the chamber is closed it starts a series of automatic functions to properly process the mat. When the job is done the Master Former cuts off the motor, opens the chamber and drops the mat on the base heater, all ready to go direct to the casting unit.

Let us tell you how this automatic routine can help you save production time and expense and make possible a better printed newspaper.



STA-HI CORPORATION, 1020 CROCKER ST., LOS ANGELES 21

Low Cost, Compact Proof Press



No. 05 VANDERCOOK
Form size: 14x24 inches

New . . . . . moderately priced general purpose proof press especially suitable for galley proofs of machine composition and made-up pages.

Simple . . . . . no cylinder packing to change and the simple, efficient inking mechanism requires no adjustments whatsoever.

Speedy . . . . . impression cylinder and inking roller trips are entirely automatic. Anyone can quickly produce good proofs at high rate of speed.

Low Upkeep . average life of impression cylinder is five years, and of inking rollers, two years. Both can be quickly changed at small expense.

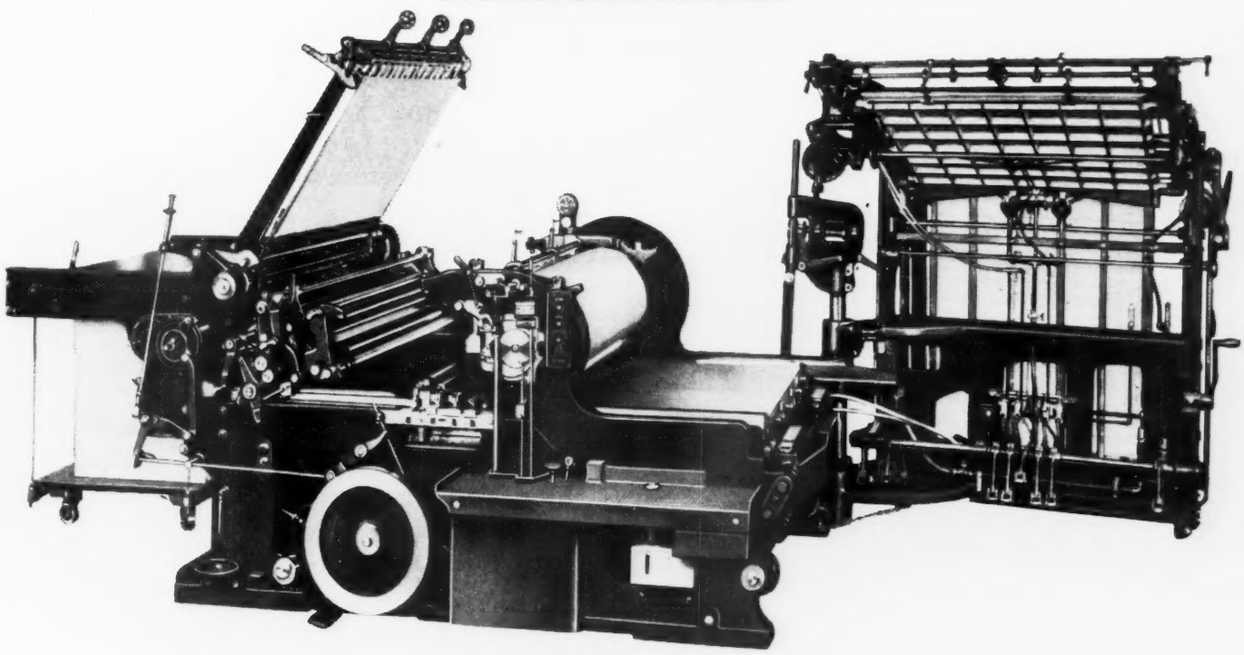
Compact . . . . extra large steel cabinet with ample storage space, convenient shelf for paper, rag bin, cleaning can and ink.

Sold Exclusively by **American Type Founders**
Branches in Principal Cities

An ATF Associate

We like Miller Presses because:

# of their Accessibility and Simplicity*



Instant wide-open access to bed and cylinder with swing away feeder and quickly raised feedboard . . . Uncovered rollers and drop blade fountain make cleaning easy . . . Positive feeder with few adjustments, no wheels, pulleys, balls, or tapes . . . Slow down delivery with accurate sheet alignment in one adjustment . . . Accessible . . . Simple . . . It must be a Miller!

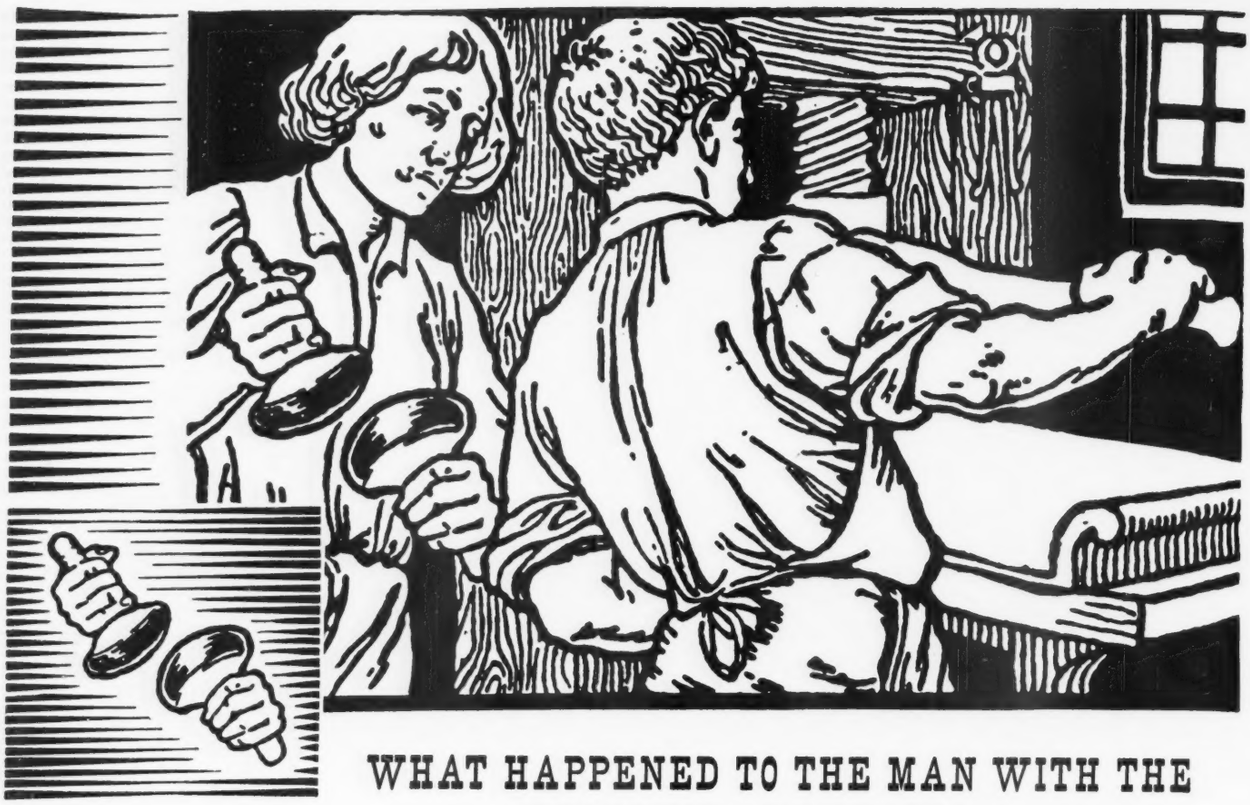
Miller **miller** *Printing Machinery Co.*

PITTSBURGH, PA.

* Here are pressmen from different sections of the United States, who agree with this statement.

Henry Esser, Wm. G. Johnston Co., Pittsburgh
Elmer Fluharty, Franklin Printing Co., Philadelphia
Timothy Kissane, Isaac Goldman Co., Inc., New York
C. G. Morris, Wm. S. Henson, Inc., Dallas
T. B. Mallison, Johnson Ptg. & Adv. Co., Dallas
Jerry Schulkamp, Atthowe & Co., San Francisco
Harry Thompson, Monitor Pub., Inc., Denver
Guy M. Turner, Boyd Printing Co., Dallas
Dillard Pendley, Stein Printing, Atlanta
Arthur B. Wind, Baker, Jones, Hausauer, Inc., Buffalo

Our representative will be pleased to furnish you with names of other satisfied pressmen.



WHAT HAPPENED TO THE MAN WITH THE BUCKSKIN INKING BALL?

BACK in 1800 he was a familiar figure in a printing shop. You saw him dabbing ink on his sheepskin or buckskin inking ball. You found him painstakingly soaking, currying and stretching the skin of his "PRECISION" instrument. For they were his working tools. He was a printer with a job to do.

Until 1804, the man with the buckskin inking ball prospered. But shortly afterwards he disappeared. For the invention of the "composition" roller came along. Progress killed his career.

Putting roller making on a modern, scientific basis was a major achievement. It was Sam'l Bingham to whom was entrusted the task of fashioning America's first "composition" roller. Upon his pioneering wisdom and effort the frame work for the present-day firm of Sam'l Bingham's Son Mfg. Co. was laid.

Today—after over one hundred years of experience—Sam'l Bingham's Son Mfg. Co. has grown to be the largest manufacturer of rollers in the world. Through 16 conveniently-located offices, we continue to provide the modern printer with the "right roller at the right time."

THERE'S A FACTORY NEAR YOU:

ATLANTA 3
CHICAGO 5
CLEVELAND 14
DALLAS 1
DES MOINES 2
DETROIT 10
HOUSTON 6
INDIANAPOLIS 2

SAM'L BINGHAM'S SON MFG. CO.
MANUFACTURERS OF
PRINTERS' ROLLERS
LITHO-OFFSET ROLLERS

KALAMAZOO 12
KANSAS CITY 6
MINNEAPOLIS 15
NASHVILLE 3
OKLAHOMA CITY 6
PITTSBURGH 3
ST. LOUIS 2
SPRINGFIELD, O.

OVER ONE HUNDRED YEARS OF ROLLER MAKING

PRINTING EQUIPMENT *Engineer*

Volume 76 Number 1

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

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INDUSTRIAL ELECTRONICS MAINTENANCE

by C. A. ROETGER

An elementary explanation of the elementals of electronic circuits and devices, many of which are adaptable to the production operation of equipment. Among these are motor drives and controls, relays and measuring circuits, regulators, servo systems and automatic machinery controls, including electronic heating of various kinds.

The book: Size, 5½ in. by 8¼ in. Bound in blue crash cloth, gold stamped titles. Consists of 190 pages. Well illustrated.

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PRINTING EQUIPMENT
Engineer
1276 WEST THIRD STREET
CLEVELAND 13, OHIO

WOOD ANNOUNCES

the complete installation of

New Press Equipment at...

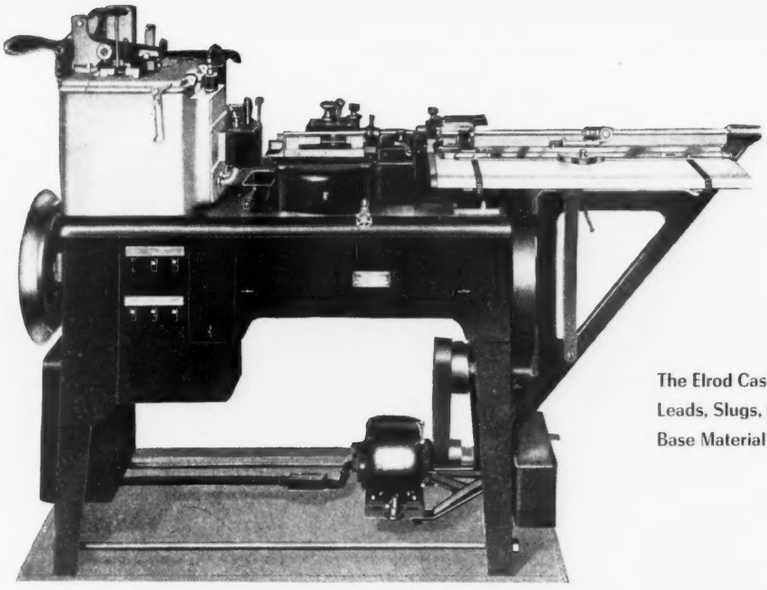
ST. LOUIS POST-DISPATCH
Comprising
• 21 Black units
• 6 four-color reversible units
• 6 Heavy-duty Folders
• 27 Reels fitted with full-speed Autopasters and *pneumatic* tensions
The New York Times.
Comprising an Additional
• 15 Black units
• 4 Heavy-duty Folders
• 15 Reels fitted with full-speed Autopasters and *pneumatic* tensions

You may now see these two complete post-war press installations. Color units incorporate single-gear drive, advanced systems of web leads, and unmatched flexibility of color couples. Black units demonstrate the new "Autoclamp" plate lock-up system, sealed lubrication, and a host of other engineering betterments.

IF IT'S Wood IT'S GOOD

Therefore, facilities are now open, for presses built to these advanced designs, with assurance of early delivery.

Inspection tours will be arranged at your convenience.
Wood Newspaper Machinery Corporation, Plainfield, N. J.
Executive Offices: 501 Fifth Avenue, New York 17, N. Y.



The Elrod Caster for
Leads, Slugs, Rule and
Base Material

The Elrod

will help eliminate your strip material worries

An Elrod in your plant will help to end delays and worries due to an insufficient supply of strip material. Your compositors will be able to concentrate on the work in hand, knowing they will have plenty of leads and slugs, border rules, and base material for mounting cuts or shell-casts.

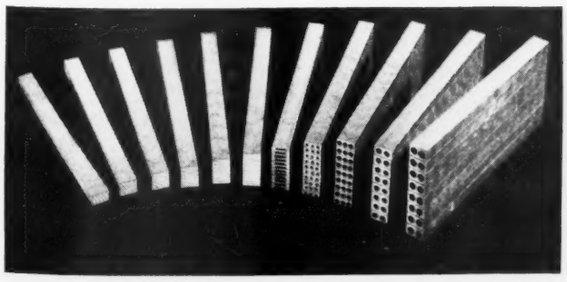
A single Elrod machine turns out a wide range of uniform, high quality material—from 1-point to 36-points in thickness—which is of decided advantage in effecting economical and profitable composing room production.

Elrod material is formed in the mold as one continuous strip of metal, and is free from brittle breaks or welds. Because of its great solidity, it will withstand today's exacting requirements in printing, stereotyping or electrotyping.

The Elrod has no complicated mechanism to get out of order, and each part is designed for dependable service. The changing from one mold to another is quickly and easily done. The maintenance cost of the Elrod is low.

Its daily use in hundreds of plants is ample evidence that the Elrod eliminates strip material worries, and will help to improve the whole production program.

All this wide range of material
from one Elrod—it means
real economy



Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Illinois

CHECK and COMPARE

EBCO OFFSET PRESS

MORE DEPENDABILITY

- Positive Sheet-by-Sheet Reloading Type Feeder
- Positive Sheet Control from Feeder to Guides
- Pre-Register Slow-Down Guides
- Unique Patented Front Guides
- Patented Pull Side Guide
- Positive Register Detectors
- Three Point Registering Mechanism
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- Accessible Sturdy Dampening Rollers
- E.B.CO Plated Water Rollers
- Inker Driven from Main Drive
- Ink Fountain Holds Ample Supply of Ink
- Cylinders Balanced on Tapered Roller Bearings
- Patented Individually Sprung Grippers
- Four Form Rollers of Different Diameters
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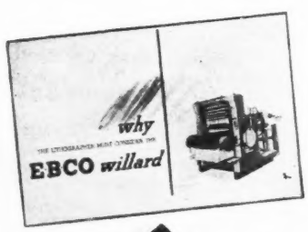
- Quick Accurate Paper Thickness Setting

MORE EFFICIENCY

- Full Sight Large Diameter Inking Rollers
- Patented Fast Action Plate Clamps
- Rapid Accurate Plate Cylinder Adjustment
- Proper Blanket Tension Easily Applied
- Inbuilt Automatic Clear View Delivery
- Streamlined for Safety
- Scientific Color Finishes
- Easy to Clean Wear Resistant Enamels
- Correctly Designed Heavy Jig Bored Side Frames
- Rugged One Piece Welded Steel Base
- Accuracy in Gear Manufacturing
- Caréful Inspection in Manufacturing
- Run-in and Tested at Factory
- Comparatively Easy to Learn to Operate

MORE PROFIT

- "V" Belt Drive from Variable Speed Motor
- Well Guarded but Permits Access to Working Parts
- Reduced Maintenance — Standard Replacement Parts
- Simplified Operating Press Controls
- Up to 6,000 I.P.H.—Plus Less Down-Time



FOR COMPLETE DETAILS SEND FOR BOOKLET. CLIP THIS COUPON TO YOUR LETTERHEAD.

EBCO

PRINTING MACHINERY DIVISION
ELECTRIC BOAT COMPANY
445 PARK AVENUE, NEW YORK 22, NEW YORK
CHICAGO OFFICE: 400 W. MADISON ST., CHICAGO 6, ILL.

OUR THANKS to the many firms in the industry who pioneered, tested and PROVED the finer working qualities of the E.B.CO Offset Press.

Wipe out weather problems

Forget the thermometer and barometer by equipping your presses with Daycos, the rollers that always run true *regardless* of the weather! You save time and money because Daycos are always ready to go—require no "seasonal changes". Daycos maintain true diameter and smooth, velvety surface winter and summer, in dampness and in drought. No chipping or cracking, no absorption of ink pigments or resulting swelling with high and low spots. And speed runs? They're right down the Dayco alley! Get the satisfaction and savings in time and money that Daycos offer you . . . outperforming ordinary rollers at every turn. they often *last four times longer!* Write for the facts: *Dayton Rubber, Dayton, O.*

ROLLERS FOR THE PRINTING INDUSTRY

dayco by **Dayton Rubber**

THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

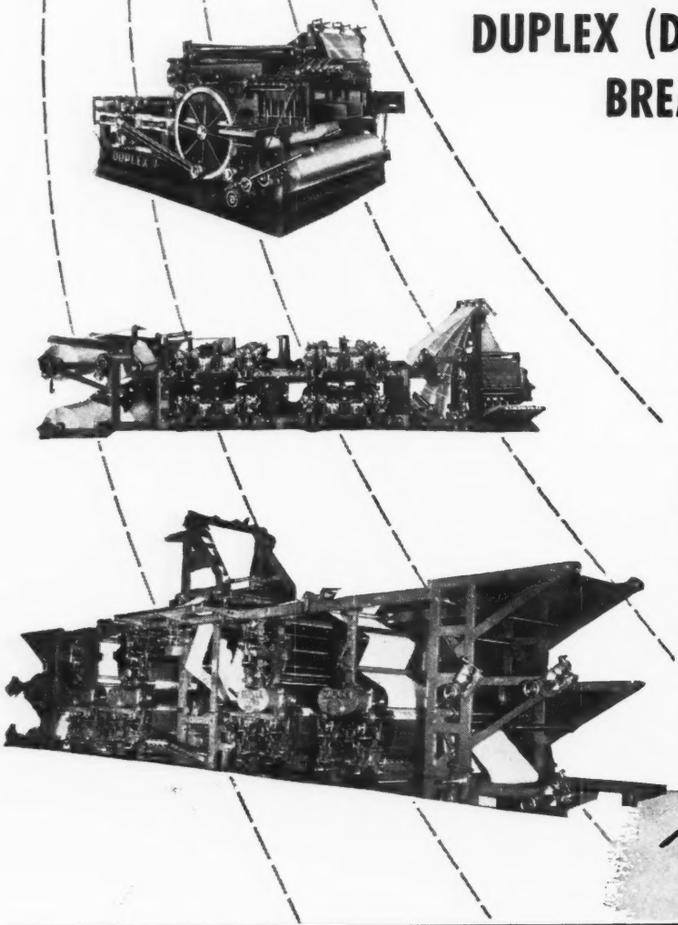
BEST 30 DAYS IN 63 YEARS

DUPLEX (Division of Goss) SHIPMENTS BREAK ALL-TIME RECORD

Operating under Goss management, the Duplex plant shipped five Unitubular, four Standard Tubular, and three Model E Flat-Bed presses during a recent month—the most Duplex equipment ever shipped in a single 30-day period.

Duplex presses are being produced and installed on a stepped-up schedule, and all field service requirements are being handled promptly and efficiently by the Goss Company. The combined experience of the two organizations, aggregating 127 years, is being devoted to the development of improved designs in tubular and flat-bed presses and stereotype equipment.

Specific information on all models of Duplex equipment is available through the Goss Chicago office; service inquiries should be referred to the Duplex Division at Battle Creek.



THE GOSS PRINTING PRESS CO.
1535 S. Paulina Street, Chicago 8, Illinois
Duplex Division: Battle Creek, Mich.
Goss Printing Press Co., Ltd., Preston, England

it's GOSS *again*

These Duplex Presses were shipped during the record month. Shipments also included large quantity of stereo equipment.

Cleveland Shopping News
Cleveland, Ohio
16-page Unitubular Press

Peninsula Herald
Monterey, Calif.
4-page Unitubular unit

Istanbul, Turkey
8-page Unitubular Press complete

Tel Aviv, Palestine
8-page Unitubular Press complete

Madras, India
20-page Unitubular Press complete

Reporter-Telegram, Midland, Texas
16-page Standard Tubular Press complete

Pepper Printing Co., Gainesville, Fla.
12-page Standard Tubular Press complete

Catholic Action of the South
New Orleans, La.
4-page Standard Tubular unit

Sun-Democrat
Paducah, Ky.
4-page Standard Tubular unit

Ukrainian National Association
Jersey City, N. J.
Model E Flat-Bed Press complete

Johannesburg, South Africa
Model E Flat-Bed Press

Benares, India
Model E Flat-Bed Press

tune up your press with

RAPID SUMMER COMPOSITION ROLLERS

Warm weather is coming! Don't be caught "with your rollers down". Be sure to have a supply of well-seasoned Rapid Summer Composition rollers on hand for warm weather use. Remember — no other roller of this type can excel the outstanding durability, accuracy, and exceptional inking qualities of these skillfully engineered products. For more than a generation, Rapid Roller Company has manufactured rollers of only one quality— the highest.

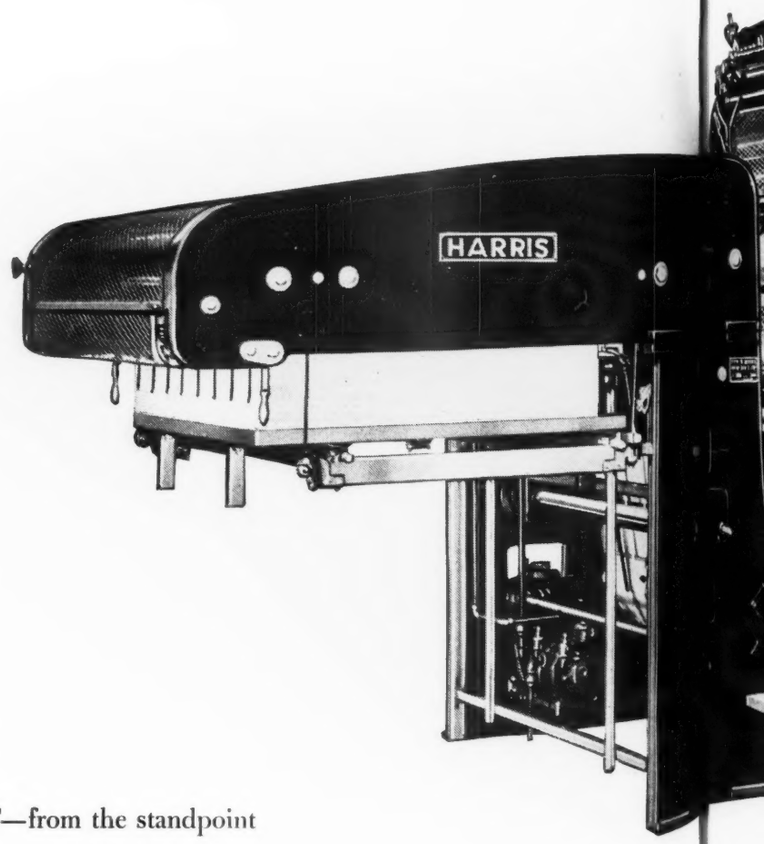
RAPID ROLLER COMPANY

D. M. RAPPORT, Pres. Federal at 26th Street CHICAGO

Ask us to prove to y

"a better run for y

on this new HARRIS Tv

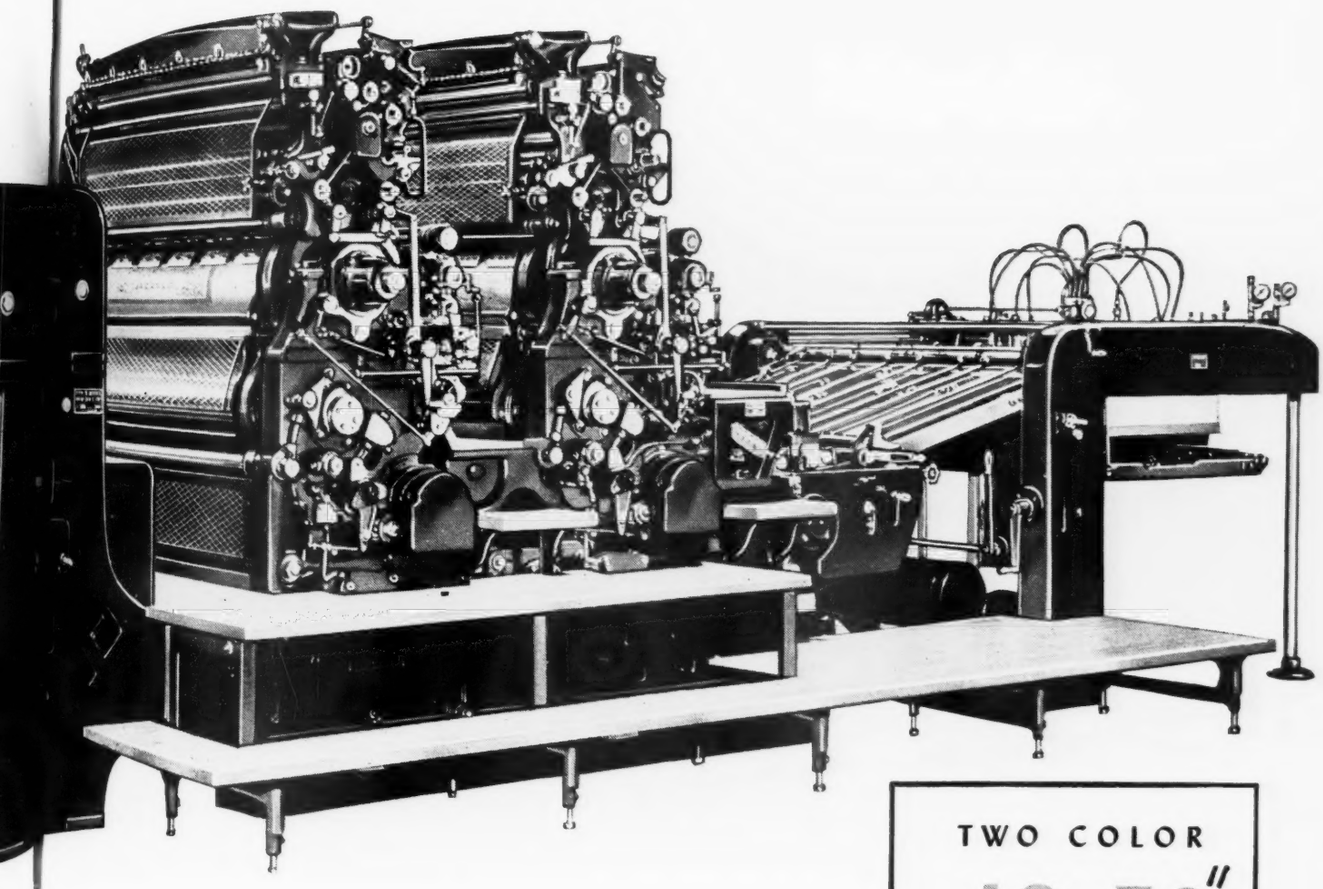


ANYWAY YOU LOOK AT IT—from the standpoint of increased production, improved quality of work, greater operating convenience, lowered maintenance costs, or a combination of all four of these factors—you'll like the added potential for profit built into this new Harris 42x58″ two-color offset press. Descriptive literature is now available.

Harris-Seybold Company, General Offices, Cleveland 5, Ohio.

you that you can get *your money"...*

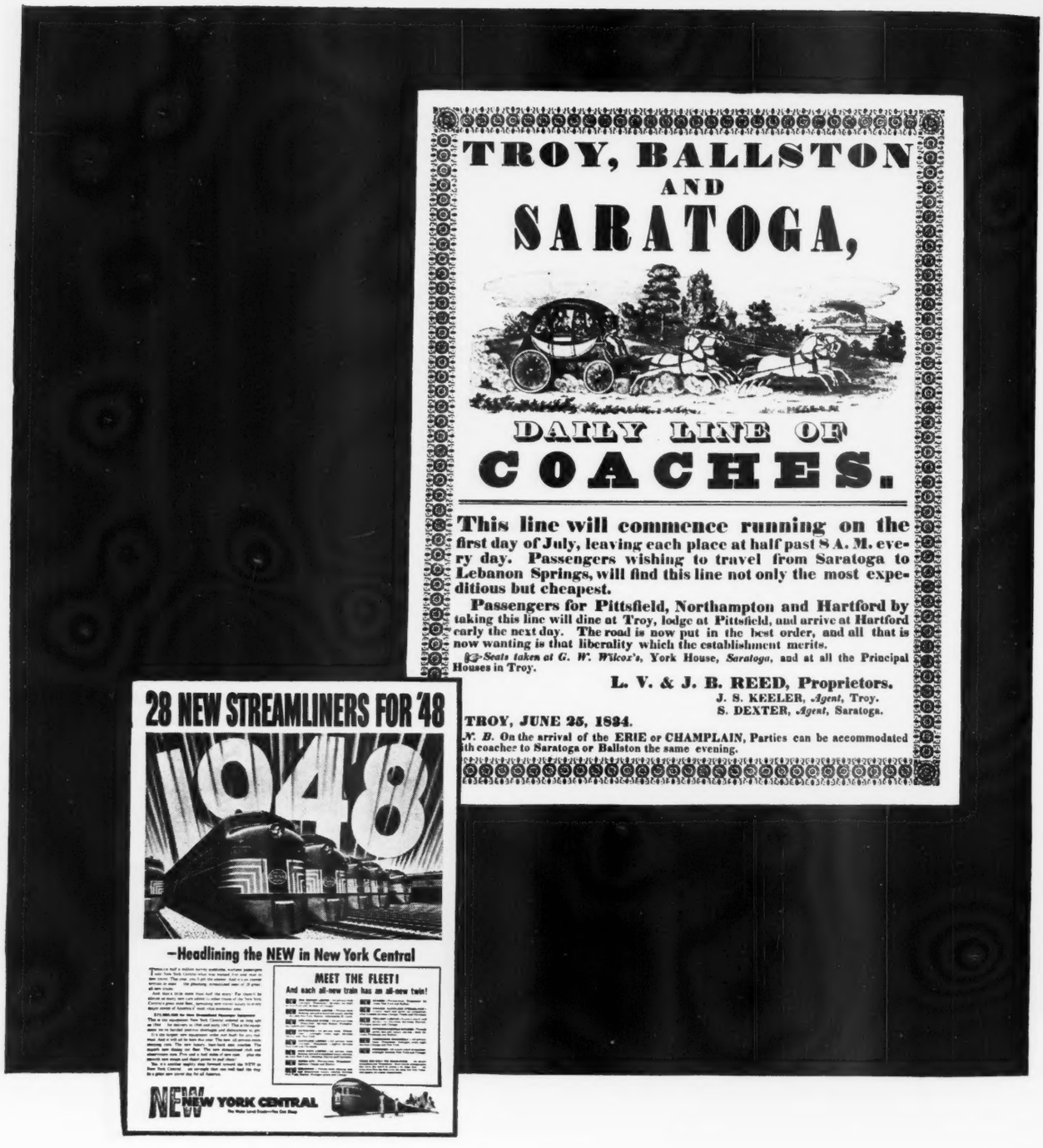
Two-color OFFSET PRESS



TWO COLOR

42 x 58"

This NEW HARRIS press is also manufactured in one- and four-color models


TROY, BALLSTON
AND
SARATOGA,
DAILY LINE OF
COACHES.
This line will commence running on the first day of July, leaving each place at half past 8 A. M. every day. Passengers wishing to travel from Saratoga to Lebanon Springs, will find this line not only the most expeditious but cheapest.
Passengers for Pittsfield, Northampton and Hartford by taking this line will dine at Troy, lodge at Pittsfield, and arrive at Hartford early the next day. The road is now put in the best order, and all that is now wanting is that liberality which the establishment merits.
Seats taken at G. W. Wilcox's, York House, Saratoga, and at all the Principal Houses in Troy.
L. V. & J. B. REED, Proprietors.
J. S. KEELER, Agent, Troy.
S. DEXTER, Agent, Saratoga.
TROY, JUNE 25, 1834.
N. B. On the arrival of the ERIE or CHAMPLAIN, Parties can be accommodated with coaches to Saratoga or Ballston the same evening.
28 NEW STREAMLINERS FOR '48
1948
—Headlining the NEW in New York Central
MEET THE FLEET!
And each all-new train has an all-new twin!
NEW YORK CENTRAL

The character of transportation advertising may change, but . . .

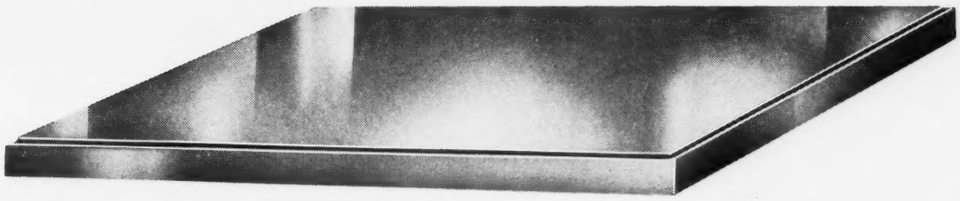
. . . good printing will always be an asset to good publishing and good salesmanship in print.

You *know* printing ink affects the quality of printed results. It affects the ease with which a paper is read by its readers, and the satisfaction with which it is read by its advertisers.

We make quality news inks, black and colored, for web presses and sheet-fed, rotary presses. It took years to develop our line of web press colors. We spent those years working side by side with men who are doing an outstanding job of printing newscolor successfully today. Let's put this experience to work on your problem.

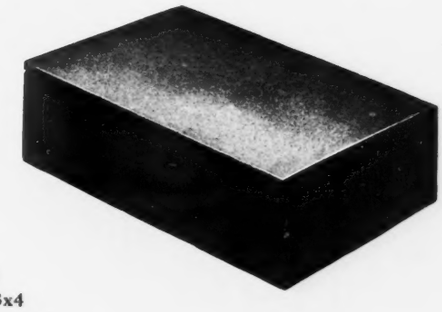
IPI, Division of Interchemical Corporation, Empire State Bldg., New York 1, N. Y.

Immediate Delivery!



IMPOSING SURFACES . . .

Ground to a glass-like, mirror-smooth finish, these highest grade steel imposing surfaces are perfectly level. Under side is reinforced by heavy ribs running in both directions. Supplied with rabbet to facilitate transfer of type matter from galleys.



Immediate Delivery!

SOLID IRON BASE . . .

Precision ground top and bottom to accurate height, with ends and sides milled or ground depending on size. Standard heights are .759″ and .853″ and in one, two or three column widths for 12, 12½ or 13 pica columns. Sizes from 3x4 to 10x50 picas also available. No extra charge for base .765″ high (Ludlow slug height.)

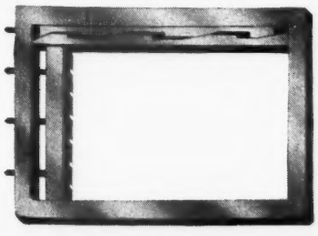
Rapid Delivery!

◀ MAKE-UP TRUCK . . .

Improved all-steel construction. Standard height is 38½″, but any height table delivered at no extra cost. Single wheel casters. Seven column top 23½″x28½″. Eight column top 24½″x28½″.

Elevating Make-Up Truck . . . ▶

Rigid, all-steel construction with positive raising or lowering feature. Absolutely fool-proof operation. 6″ movement in truck with 3″ above or below a given center. Center position at 38½″.



STEREOTYPE CHASES . . .

These chases are made from special bright steel and drawn to exact and uniform height to assure the accuracy so vitally important. Joined by latest electrical welding to produce a one-piece frame, square and true in every particular. *Orders placed now for future delivery.* Write or wire your requirements *now.*

EASTERN FOR ECONOMY

EASTERN NEWSPAPER SUPPLY, INC.
9603 Northern Boulevard, Corona, L. I., New York

Place your order now for these cost-cutting aids to your production

Compare! for Cleaner Impressions *with* less wear

TINGUE
TRADE MARK
PRINTING PRESS BLANKETS

TINGUE DRAWSHEETS

TOP

This drawsheet is firm, durable, economical and long-lived.

IMPROVED SATISFACTION

Coated with "Calvaprene" by du Pont, on a fabric which has been impregnated with "Neoprene".

GOLD TYMPAN CLOTH

An old favorite for flatbed presses. Skivered metallic surface accepts excess ink and flakes it off without smudging.

TINGUE UNDERBLANKETS

CUSHION CORK BLANKETS★

Highly resilient and recommended as the underpacking for "Combino" and Tingue Coated Felt or in combination with Foundation Blanket where a drawsheet is used.

FOUNDATION BLANKET

A firm durable oilproof underpacking laminated by du Pont with "Neoprene" for use in combination with "Cushion Cork" and Tingue Drawsheets or Felt.

TINGUE COATED BLANKETS

TINGUE FELT

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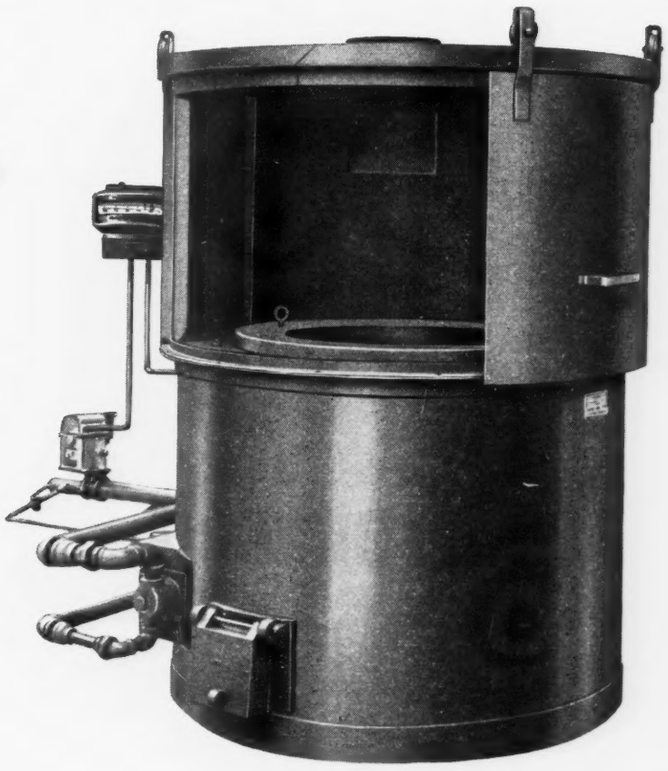

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1000 to 10,000 LBS.

Now, while you can, is the time to replace your worn out or antiquated type melting furnace with a modern, efficient Fisher-Monarch.

Many shops have. And they have found the many combined features of the pre-war Monarch and the new Fisher to be saving of time, space, metal, heat and tempers.

The Fisher-Monarch remelting furnaces have a six inch lining to prevent heat loss. The pot is of heavy iron, built to give years of service. It is hemispherical in shape with no chambers, muffles or heating elements to become clogged or interfere with easy cleaning. Self-closing pouring valve is located inside pot for safety.

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Now... a complete line of melting furnaces—gas, oil, electric

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A DIVISION OF LINDBERG ENGINEERING CO.

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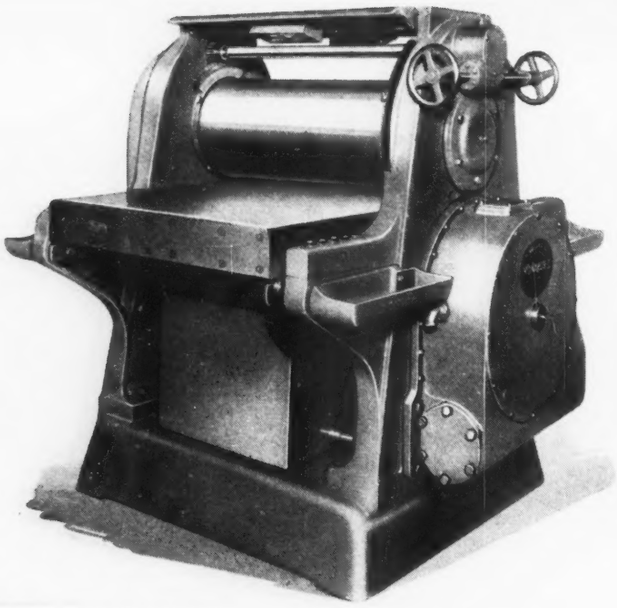

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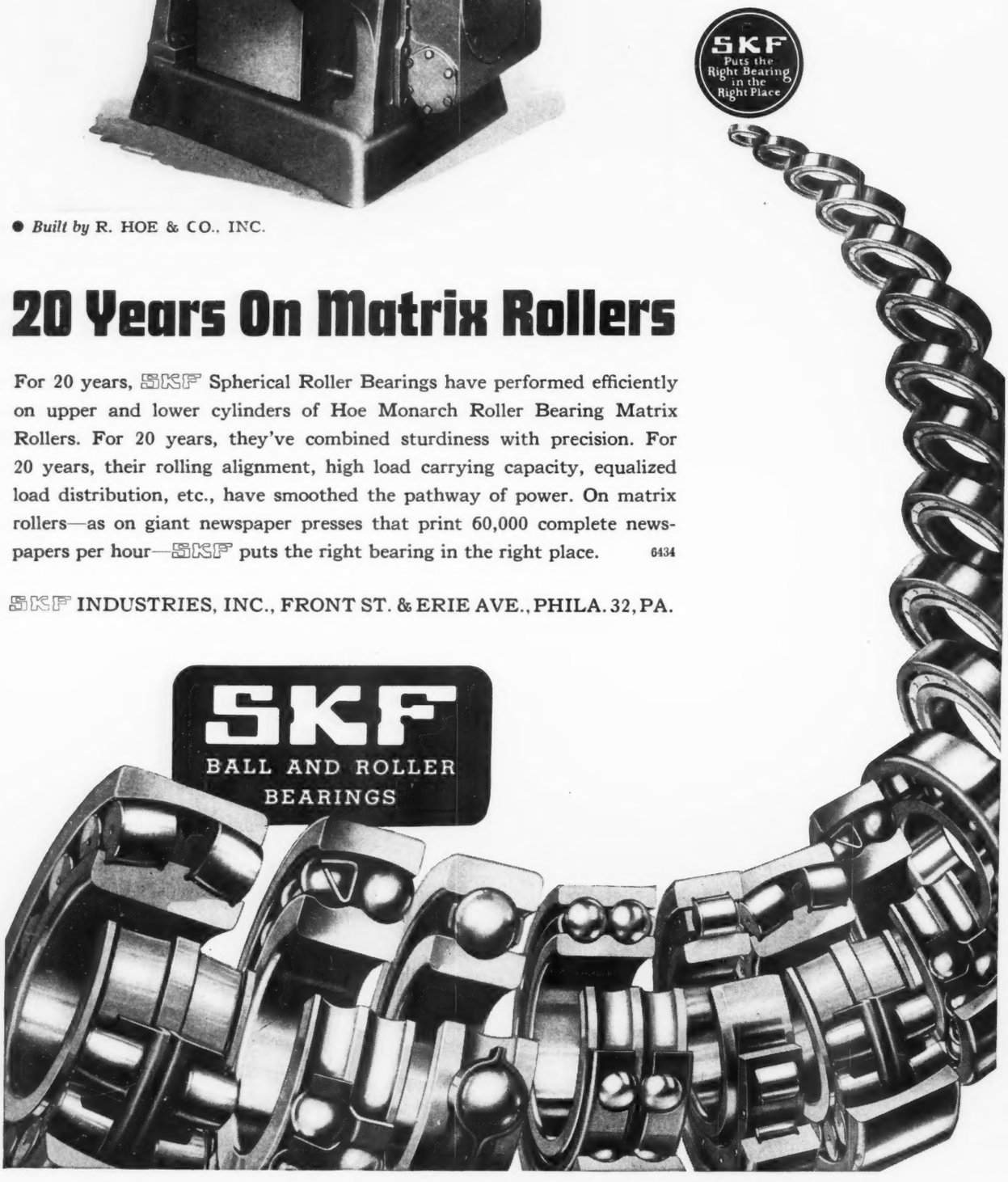
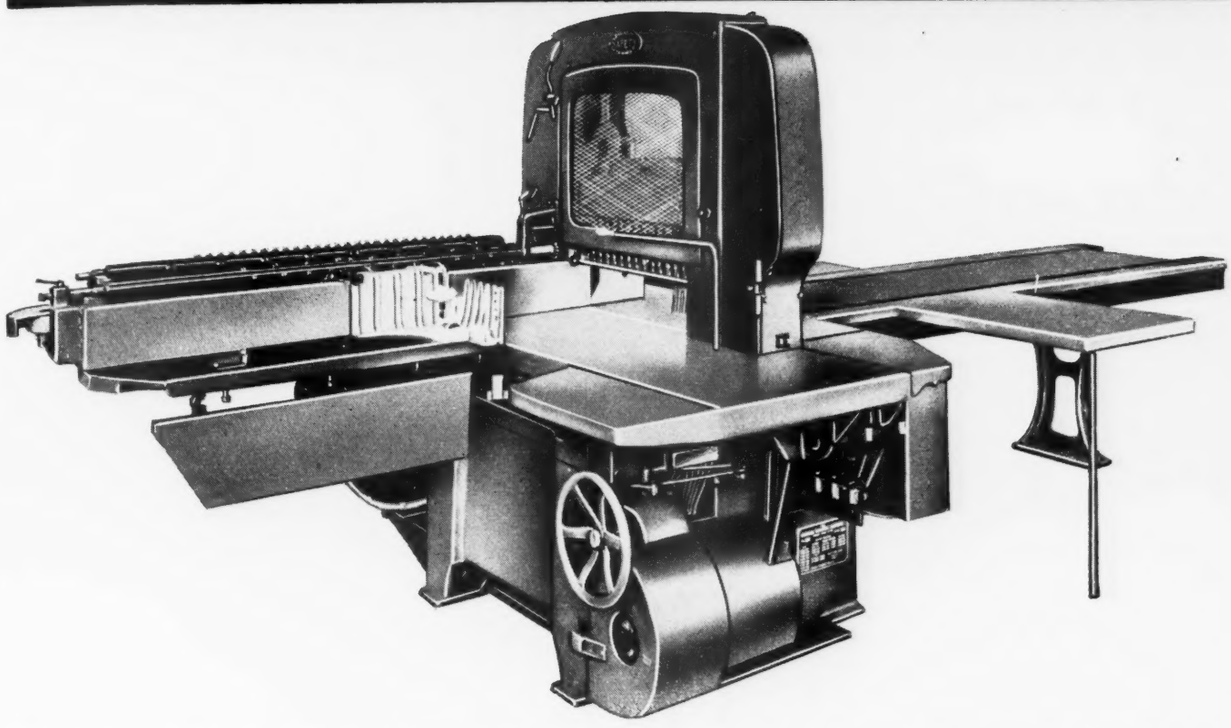


The BRACKETT Trimmer brings you the...



Great Economies of Straight Line Production

With the Bracket Trimmer work flows in a straight line. Waste motion is eliminated. Operator does not handle either finished work or trimmings. Each is conveyed away from him – to rear of machine. Speed of conveyor belt may be adjusted to meet job in work.

UNQUALIFIED ACCURACY—Mechanical setting of spacer shaft means unqualified accuracy—the accuracy required in cutting multiple punch cards, where even the slightest variation would render the cards useless.

With the Brackett *mechanical* setting there are no false cuts. Whether the run be five hundred or five million, the last lift will be handled with the same fine precision as the first.

QUICK CHANGE-OVER cuts setting time. For recurring jobs, preset gauges may be retained, doing away with need of resetting.

FLEXIBLE AND FAST—Occupying *much less* floor space, the Brackett Trimmer handles booklets singly or in gangs, inserts, covers, labels, circulars and other flat work at *double or triple* the speed of the conventional guillotine cutter.

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DEXTER Machines are built by Dexter Folder Company at Pearl River, N. Y.
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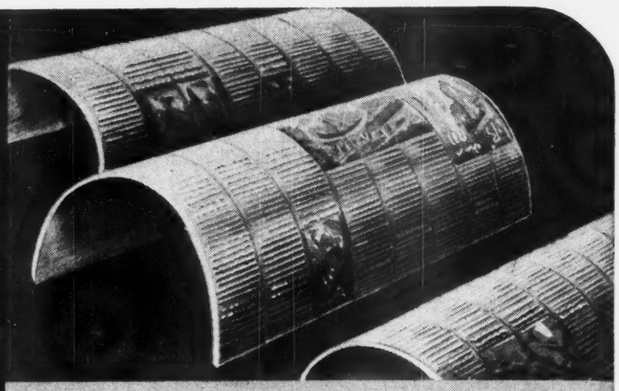
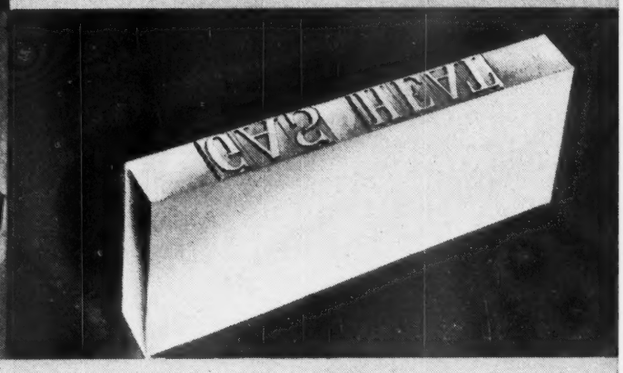
FLEXIBLE *GAS* HEAT SOURCE FOR ALL THE *Graphic Arts*



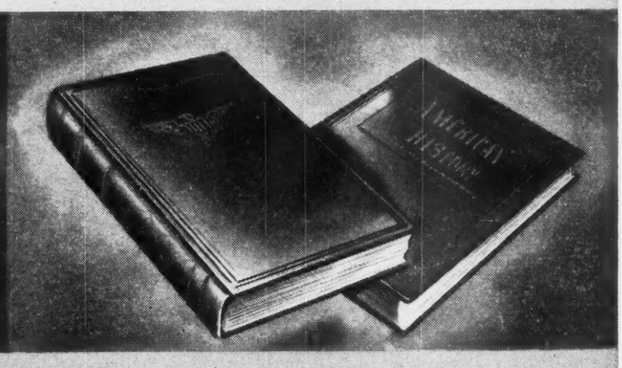
Behind the headlines of the press of America, GAS makes the news in the stereo rooms of hundreds of newspapers.

Behind the illustrations in the news and trade press, flexible GAS performs several important functions in electrotype production.



This line of machine-set type came from an *Intertype machine* in which delicately controlled flames of GAS kept the type metal at precisely the required temperature.

To speed production in the plants which print the millions of copies of weekly news magazines Gas-fired dryers prevent smudging by drying ink at press speed.



In the bindery, too, GAS keeps the glue pots at the correct temperature, cures cover stocks, provides heat whenever and wherever needed.

And these are just some of the many applications of GAS in the graphic arts—reminders that flexible, clean, controllable GAS has no equal as a heat source. Your local Gas Company Representative will bring you up-to-date on developments.

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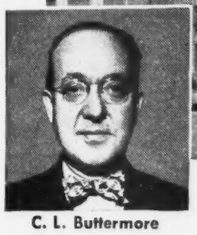
MORE AND MORE...
THE TREND IS TO GAS
FOR ALL INDUSTRIAL HEATING

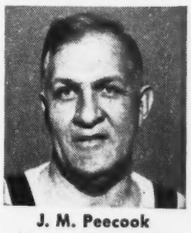
CLEVELAND NEWS
HOME FINAL
"A Friend of the Family"
TUESDAY, FEBRUARY 3, 1948
ARABS MASS FOR PALESTINE DRIVE
Trained Soldiers Pour Into Damascus
February 15 Seen As 'D-Day'—Weapons Sought in France
DAMASCUS, Syria (AP)—Truckloads of armed Arabs rolling into Damascus led many observers to believe today that a general attack on Palestine Jews may be approaching.
Some believe such an attack has been set for February 15.
Fawzi Bey al Kaukji, leader of the Arab forces, told newsmen
THE NEWS

Modern plant of the progressive Cleveland News

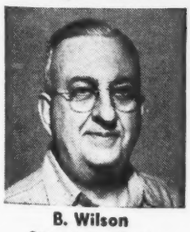


C. L. Buttermore
Mechanical Supt.

E. C. Bowles
Composing Room Supt.

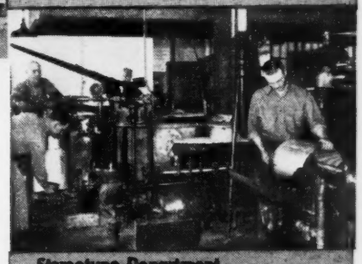


J. M. Peecook
Linotype Machinist

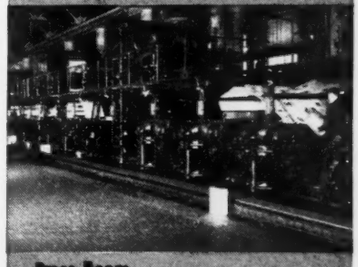


B. Wilson
Stereotype Supt.

Composing Room



Stereotype Department



Press Room

These Men Know

that important factors influencing favorable production costs and good reproductions are sharp solid slugs and plates.

Glidden

FINE TYPE METAL

METALS REFINING COMPANY
Division of The Glidden Company
HAMMOND, INDIANA

Factual information on request • Stocks in principal cities

You, too, can have production contentment and reproduction satisfaction by using this fine type metal and dross exchange service.

Glidden QUALITY PRODUCTS

WHEN

Fuel costs
Make-overs
Dross losses

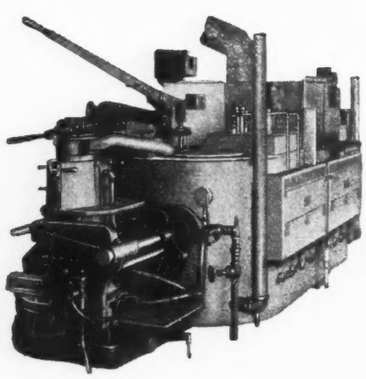
} RUN TOO HIGH

THEN

Cut them all with KEMP Immersion-Fired Melting

You will save on fuel bills whether you are now using gas or electricity. 40% is the normal economy of gas over electricity for the same number of heat units . . . also the normal economy of the Kemp carburetor, burner, and heating method over any other gas-fired system.

You get better casting because the metal is held more accurately to casting temperature. Recovery is quick when new metal is added because the large heating elements are *inside* the metal, not *outside* the pot.



You save metal because you reduce dross. Part of the spent gases from the burner are directed over the surface of the molten metal to keep air away and reduce oxidation. It's as simple as 1-2-3: less air . . . less oxidation . . . less dross!

Over 500 KEMP installations are proving their efficiency now in stereo or electro plants throughout the country. We can tell you where to see one, or we can send you copies of users' records.

THIS POT CUT DROSS LOSSES 18% . . .

for a large eastern daily which operates two stereo rooms in two plants — one with KEMP immersion-gas-fired pots (like the 12-ton unit shown), the other with electrically heated pots. Because the spent products of combustion from a KEMP pot blanket the metal, the stereo room on gas boasts 18% less dross per 10,000 plates (15,500 lbs. per year versus 18,250 lbs.). Here's clear proof of just one of KEMP'S six advantages in stereo and electro work: precise temperature, more production, reduced cost, less work, better work, better working conditions.

KEMP OF BALTIMORE

PRECISION CARBURETION ✦ ADAPTED COMBUSTION FOR INDUSTRY'S HEAT USING PROCESSES
ATMOSPHERE GENERATION ✦ ABSORPTIVE DRYER SYSTEMS FOR PROCESS CONTROL AND PROTECTION

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405 E. Oliver St., Baltimore 2, Md.

Send me your Bulletin 1E-10 on Stereotype and Electrotype melting .....

We cast ..... plates per day. We'd like to save 40%, too. Get in touch with us .....

NAME .....

POSITION .....

COMPANY .....

PLACE .....

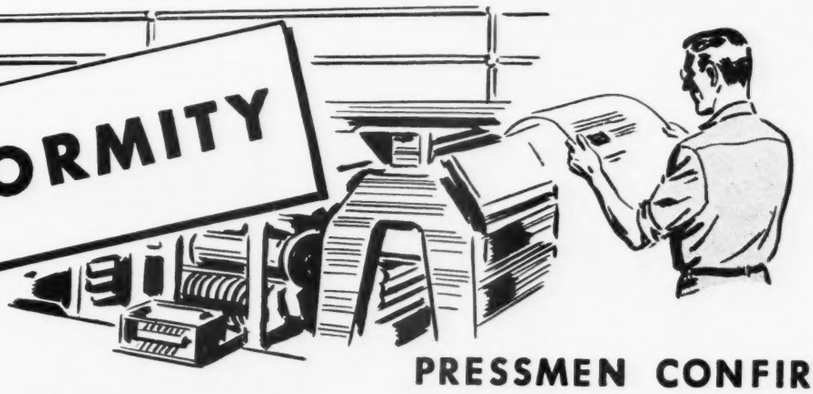
A CONSTANT SUPPLY

INK-MAKING CAPACITY
200 MILLION POUNDS
PER YEAR

PROMPT DELIVERY

A FLEET OF FAST TANK TRUCKS
OPERATING FROM STRATEGIC POINTS

UNIFORMITY



PRESSMEN CONFIRM IT

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GEO. H. MORRILL
GENERAL PRINTING INK DIVISION
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NEW YORK · BOSTON · CHICAGO · DETROIT
MINNEAPOLIS · ST. LOUIS · FORT WORTH
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Sun CHEMICAL CORPORATION

WORLD'S LARGEST MANUFACTURER OF NEWSPAPER INKS

"HOURLY PRODUCTION MARVELOUS"

...says this KANSAS printer about his

NEW ATF LITTLE GIANT

"it's a dandy . . .

trouble-free performance on every kind of stock . . .

gummed sheets went through for eight impressions . . .

unbeatable cylinder-press quality . . .

makeready time down to a minimum . . .

a trustworthy, high-speed producer . . .

economical and a pleasure to operate . . ."

The STEPHENS PRINTERY
Printing Quality · Service · Economy
TELEPHONE FAIRFAX 4918
1829 SMITH ROAD · KANSAS CITY 2, KANSAS

June 30, 1947

Mr. F. Earl Swain, Manager
American Type Founders Sales Corporation
934 Wyandotte Street
Knasas City 6, Missouri

Dear Mr. Swain:

For some time now I've wanted to express appreciation to you and your staff for your helpful cooperation and advice during the recent months.

Also, for the new "ATF Little Giant" press: it's a dandy! In the several weeks since installation it has turned out trouble-free performances on every kind of stock, including envelopes and some not-so-flat gummed sheets that went through for eight impressions, giving that unbeatable "cylinder press quality" sharpness and clearness to jobs formerly banged out on platens. And doing it in hourly productions that are modern and marvelous. Because of the few operating adjustments, the fixed front guides, the cylinder type of impression, and the general ease of changing over from one job to the next, press makeready time is really down to a minimum. Inking is ample and well controlled. The feeder is simple sure-fire, and dependable.

In short, the new "Little Giant" has already proved itself a trustworthy, high speed producer that is both economical and a pleasure to operate.

Many, many thanks for a wonderful press and for your helpful interest in a new shop.

Sincerely,
D. C. Stephens
D. C. Stephens.

Ask your ATF Salesman to explain the ATF Little Giant's many exclusive money-making features, and show you commercial samples it has produced for other printers.

American Type Founders

200 Elmora Avenue, Elizabeth B, New Jersey

'47 Paper, Mechanical Costs Reach 48% of Total Expenses

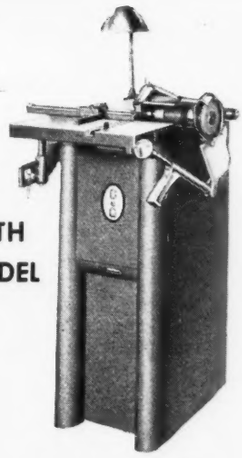
Analysis of 50,000-Circulation Daily Shows 3-Year Cost Trend

By Robert U. Brown

The composing room alone represented 20.6% of all expense in 1947, whereas in 1945 it accounted for 18.95%. The composing room expense last year was $295,977, an increase of 27.3% over 1946 and a 69.05% increase over 1945 figures.

EDITOR AND PUBLISHER for February 28, 1948

Use *Morrison* Equipment To CUT Your Composing Room Cost

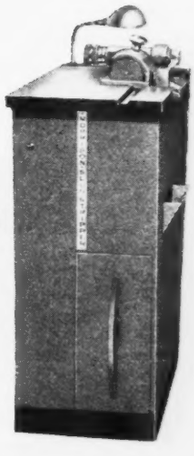


TRIGGER SPEED WITH C & G MODEL 45 SAW TRIMMER

One smooth, easy movement, like squeezing the trigger of a .45 caliber automatic, raises or lowers the saw to the correct height. You get extreme accuracy, budget-pleasing economy.

MEET TOUGH PRODUCTION SCHEDULES AND SAVE MAINTENANCE COSTS WITH C & G MODEL 3-A SAW TRIMMER

This steady, reliable performer needs practically no servicing — a heavy-duty composing room saw trimmer that has proved itself in leading newspaper, trade and printing plants everywhere.



CORRECTIONS AND ANGLE LINES ARE EASY WITH *MORRISON* SLUG STRIPPER

Now you can strip the type face of any slug or single type character to the thickness of zinc, electro or shell stereo. Savings in make-up time are limited only by your volume of advertising composition.

Write for detailed specifications and prices.

THE *Morrison* COMPANY

125 W. MELVINA STREET • MILWAUKEE 12, WISCONSIN

Linotype and Intertype Operators VOTE 4 to 1 for MATRIX CONTRAST SERVICE

Reduces Eyestrain

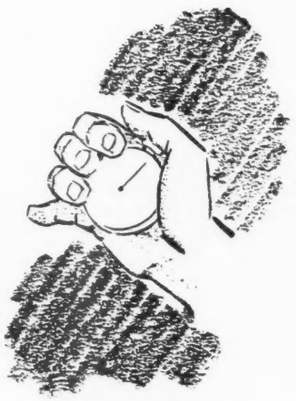
Ask the man who *operates* a Linotype or Intertype machine and he'll tell you the down-to-earth, on-the-job story of what big savings Matrix Contrast Service effects. There is all-around economy... savings in eyestrain, savings in errors and savings in time and money.

Matrix Contrast Service's new use of colors is receiving nationwide acclaim from operators, too. It pares wrong-font errors to the bone, and the selection of "pi" matrices is made easy. Different fonts have their own eye-catching color. The result is that errors in fonts make a bright color-signal... *before* the line is cast.

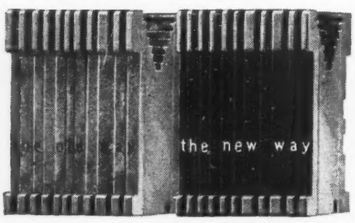
Operators and plant managers alike will want to know more about this great new service. For full details, write our nearest office.

Less Fatigue

Greater Accuracy



Saves Time



MATRIX CONTRAST CORPORATION, Empire State Building, New York 1, N. Y. — 326 W. Madison Street, Chicago 6, Ill.—1105 Trenton Street, Los Angeles 15, Calif.—Sole licensees of the Percy L. Hill Matrix Contrast Patent No. 1,796,023, other patent pending. European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E. C. 1.

Matrix Contrast Service

EDITOR'S NOTE

IN presenting the first of a series of editorial articles about the rotogravure printing process, the editor wishes to explain that complete statistical figures pertaining to a growing industry do not seem to be available. Particularly in the commercial field, statistics are unobtainable. This is understandable when it is considered that gravure production plants are not too eager to release production figures because of competitive reasons. But in this series, we hope you will obtain a fairly comprehensive idea about rotogravure—its techniques and utilities.

Rotogravure—

Its place in the Graphic Arts summarized — Principal utility is in the large-run newspaper supplement field, the magazine field, and in the wrapper, labeling and packaging fields

By W. B. THIELE*

*Sales Manager, Graphic Arts Div., The Sperry Corporation, Long Island City, N. Y.

INTEREST in rotogravure has reached a point where a presentation of the factors influencing this most interesting process will prove of value to members of the Graphic Arts industry. After years of development, rotogravure has emerged as a commercially satisfactory high-speed printing process, particularly for multi-color production.

It will be the purpose of this first article to summarize the present rotogravure situation. Subsequent articles will take up technical and production matters surrounding the printing cylinders, the presses, inks and other materials essential to rotogravure printing production.

There is no contention on the part of the writer of this article that rotogravure can take the place of, or supplant, the letterpress or offset printing processes. Our contention is only that it will further support the growth of and the need for printed material, particularly the amazing expansion in the use of color process printing.

Generally speaking, the rotogravure press itself is a simple machine upon which can be produced multi-color printing at high speeds. The simplicity of the press, however, does not extend to the printing plate and difficulties in production and certain inflexibilities are still a limiting factor to the general use of rotogravure for commercial printing. It is true that once an accurate intaglio cylinder is made and placed on a competent rotogravure press, the printing operation itself is simple and maximum operating speeds are attained.

In general, it is conceded that rotogravure lends itself to high-speed web printing. The reasons are obvious. Simplicity of ink distribution, instant ink drying at low temperatures, (for example, inks dry between color impressions thus eliminating trapping problems), no makeready, and register and web tension controls, all contribute to practically automatic printing with minimum press problems.

Utilities of Rotogravure

Rotogravure is a practical and useful mono and color printing process. Its greatest use is in the high-speed color production of newspaper Sunday supplements. The process color work appearing in today's newspapers is voluminous. Fine work on inferior stocks is appearing in 41 metropolitan newspaper editions.

Rotogravure, too, has found a place in the magazine publication field. While at present the number of individual magazines (at least five of national circulation) printed wholly or partly by that process is relatively small, yet their total number of copies is in large volume. For instance, Crowell-Collier, publishers of *American Magazine*, *Collier's* and *Woman's Home Companion*, print over 1 million copies per day. It is reported that other magazines will be printed by rotogravure in the early future.

Many color pages appearing in mail order catalogs are printed by rotogravure.

The use of the process has been further extended to catalog color production and is finding ready favor for many types of

advertising folders and mailing pieces. There is no question that rotogravure has been successful in this highly important, large-volume section of the industry.

Progress in the commercial field has not been as rapid, and rotogravure up until recently, has been confined to the printing of aluminum foil, cellophane and other transparent plastic materials and some paper label and wrapper production.

Converters who were faced with the problems of offsetting and sticking when rewinding these packaging materials found that rotogravure inks' instant drying properties offered a solution. The printing quality and color uniformity possible with the process will extend the use of rotogravure to larger sections of the commercial printing industry.

Rotogravure is often the answer to the many production problems incident to satisfying the packaging industry demands for highly technical heat seal, protective and gloss coatings.

The high quality multi-color printing appearing in the Crowell-Collier publications and in the Sunday newspaper supplements, such as the New York *Daily News*, Philadelphia *Inquirer*, St. Louis *Post-Dispatch*, clearly show that the process is out of the experimental state. Production speeds range from 800 to 1200 ft. of printed web per min., or 20,000 to 25,000 imp. per hr. Examination of some of the color pages of *Fortune* and *Collier's* magazines show such high quality that rotogravure must be taken into consideration in planning and thinking about the future.

The Fly in the Ointment

However, as in any process, there is a fly in the ointment. One prominent rotogravure printer, who by the way operates all three processes, aptly expresses the situation in the following words: "As a printing press, rotogravure is the sweetest printing machine of them all, but as a printing plate, she is the most cantankerous and difficult of the lot."

The "fly in the ointment" in rotogravure printing, to state it bluntly, is carbon tissue. Research and development in photography and in the preparation of negatives and positives has been satisfactory and no serious complaint can be found in the photographic end that would not apply also to letterpress and offset. However, after the positive has been prepared and is ready for further steps in the engraving process, no real improvements have been discovered. The industry still uses carbon tissue which must still be wrapped around the cylinder for etching purposes. Carbon tissue is tricky, is easily affected by temperature and moisture changes (its hygroscopic) and is generally undependable and is a primitive method for transferring the image from the positive to the printing cylinder itself.

In appraising the utility of rotogravure, of course, it's only fair to mention its weaknesses. In discussing the deficiencies of carbon tissue, I don't want to create the impression that it is no good. Such a statement would not be true, inasmuch as many thousands of cylinders are prepared each year by the carbon tissue process. The ray of hope is that at least one research foundation has been set up to study and develop better means of rotogravure cylinder production. This foundation will spend something like $200,000 on the metal aspects of the cylinder, engraving, etching materials and will fully investigate the carbon tissue method.

The Ideal Press

Before discussing the intaglio printing cylinder, which will be taken up in a succeeding installment by a well-known gravure platemaking executive, we feel it is important to present a brief description of the ideal rotogravure press. Certain features, particularly those pertaining to web handling, apply to any web process. The others apply to the rotogravure press itself. The points presented are the result of a survey in which prominent rotogravure printers in both publication and commercial fields were consulted. The following collective opinion represents the ideal rotogravure press:

Stock Handling:—Roll stands should be able to pick stock up from the floor, eliminating the need for cranes. Autosplicers are considered a must where runs are long and continuous.

Web Tension:—Highly sensitive tension controls capable of feeding the web at any desired tension, eliminating pull and tug, are of paramount importance to close register high-speed printing.

Color Unit Construction:—Fully accessible, particularly to doctor blade.

Sensitive and fully adjustable impression, hydraulically controlled.

Fully adjustable doctor blade with lock stop regulator.

Easily removable cylinder and inking mechanism with integral mounting.

Some type of fountain enclosure.

Roller mounted and accessible ink tank with ink pump and motor as integral part of the assembly.

Full circumferential running register control.

Essential push-button control stations to be located at color unit and delivery end of press.

Change Over:—Provision for auxiliary replacement of printing and inking units.

Speed differential control for feed and pull rolls when printing cylinder diameters are changed, capable of actual web tension "tuning" on the fly.

Drying:—Individual insulated drier units with temperature regulators capable of circulating large volumes of heated fresh air.

These are some of the features considered essential in the design of a good rotogravure press. It is conceded that incorporation of all these features fully takes advantage of rotogravure's inherent simplicity.

Another Fly in Ointment

Now for another fly in the ointment. The art of etching intaglio plates and cylinders is an old one and has been practiced by engravers for many years. To produce conventional varying depth intaglio engravings, a maximum amount of skill has always been required. Until the Dultgen process came along, employing a combination of depth and the halftone dot, duplication was very difficult and in many instances was im-

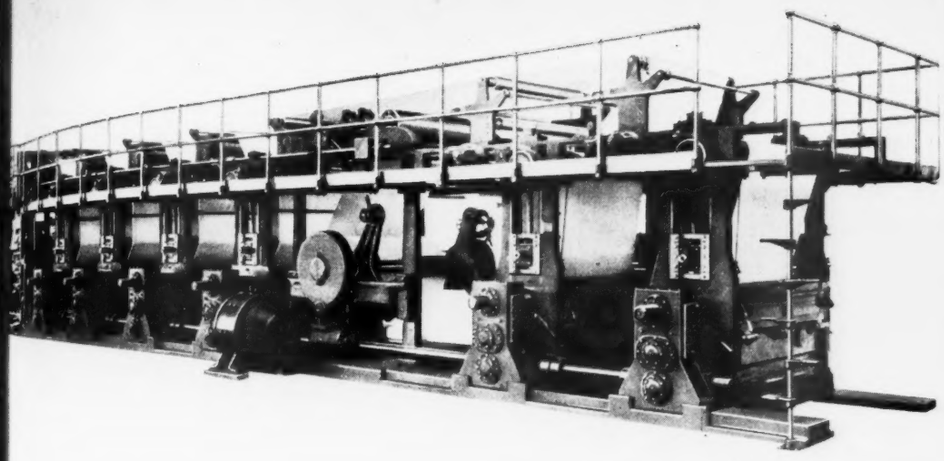
1—Cottrell Multi-Color Publication Rotogravure Press—Prints two, three or four colors first side of the web and four colors on the second side of the web at speeds from 1200 f.p.m. to 1600 f.p.m. Monotone as well as multi-color units can be used with folder, cut-off and flat delivery rewind.

2—Sperry Rotogravure Color Unit—For printing labels and wrappers (cellophane, foil and paper) and cartons with over-and-under web threading style as shown in this illustration, and for newspaper, magazine and catalog printing with straight-through web threading. Printing cylinder widths, 26 in. to max. of 50 in. Max. cyl. circumf., 46 in. Max. sheet size, 52 in. by 46 in. Max. web speed, 1000 ft. per min. upward. Floor length, per unit, 6 ft.; height to top of drier, 12 ft.; threading height, 7 ft.

3—Harris Sheet-Fed Gravure Printing Press—Sheet size, 30 in. by 45 in. Capacity, 5000 i.p.h. Plate size, max., 33¾ in. by 46 in. wide; min., 32¾ in. by 46 in. wide. Can be supplied in from 1 to 6-unit press, combined with 1 or 2 letterpress units. Harris web-fed rotogravure presses also available with cylinders 35 in. to 70 in. circumf., 56 in. wide; 8000 cyl. rev. per min.

4—Champlain High Speed Multi-Color Rotogravure Press—Press is shown with roll rewind delivery. For printing on paper, board, cellophane, pliofilm, foil and glassine with lacquers, metallic and gloss inks as well as standard gravure inks. Each press takes variety of printing cylinder sizes. Presses built in 8 in., 14 in., 20 in., 26 in. and 36 in. widths. Cylinder circumf., 9 in. to 34 in. according to size of press. Max. sheet sizes, 9 in. by 18 in. to 37 in. by 34 in. according to size of press. Production speed, web, up to 750 ft. per min. depending on stock. Sheet production, up to 12,000 per hr. Approx. heights (according to press) from 6 ft. 6 in. to 8 ft. 2 in. Approx. floor space (according to press) 4 ft. 3 in. by 25 ft., to 7 ft. by 37 ft. Presses can be combined with following fabricating operations: Slitting, slit roll rewind, perforating and scoring, embossing, gluing, punching and dieing.

5—Goss Speedry Newspaper Supplement and Magazine Rotogravure Presses—This view shows part of an installation of 24 rotogravure units (or three separate presses) arranged to print newspaper supplements, four colors on both sides of a single web at maximum speed up to 25,000 cyl. rev. per hr. Net production, however, in the interests of better quality of work, is 15,000 cyl. rev. per hr., equivalent to 30,000 copies of the product per hr. Magazine presses in use are arranged to print three colors on one side of the web, and four colors on the other, and are designed to operate at cylinder speed of 20,000 r.p.m. These presses equipped with special former type magazine folders; signatures are arranged three around each cylinder, so that production from each press, running at maximum capacity, is 60,000 signatures per hour.



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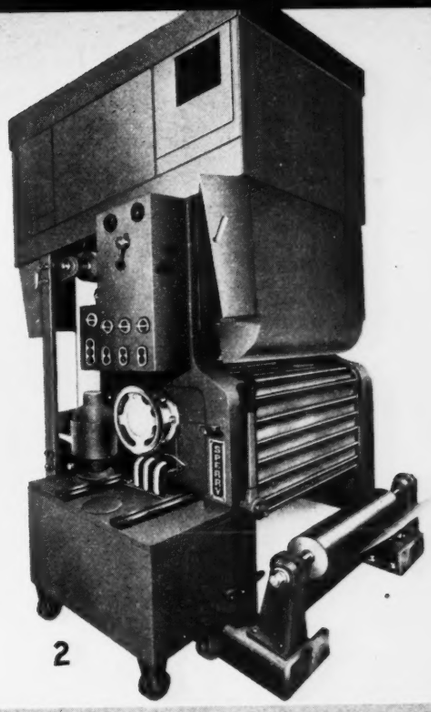

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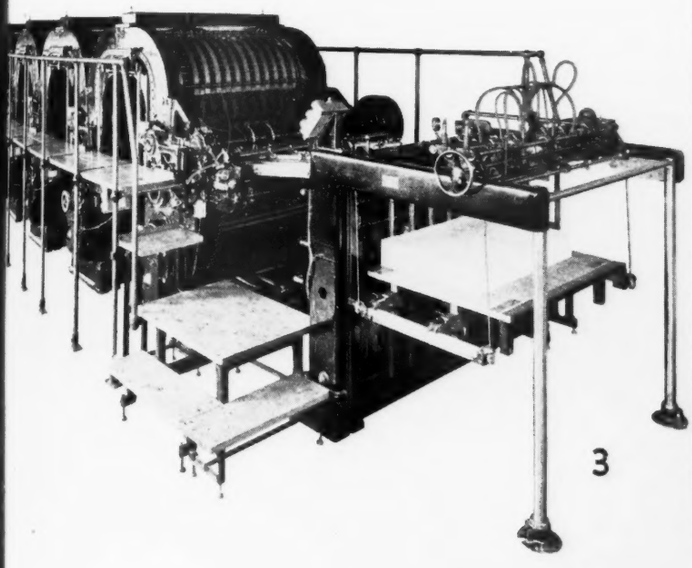

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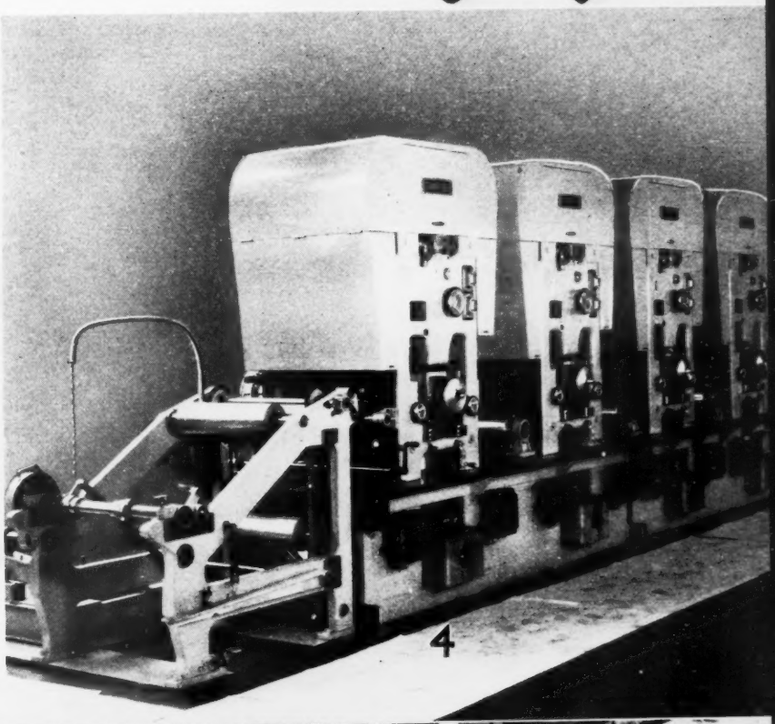

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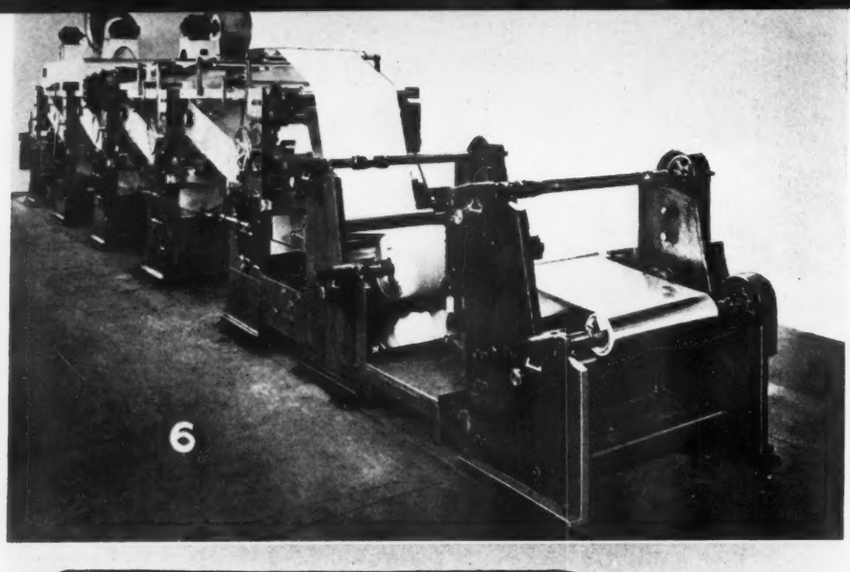
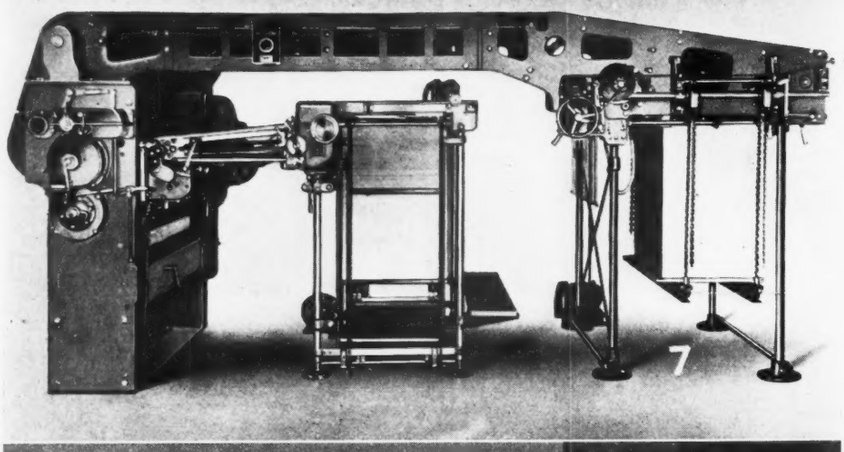
On this page 29 and on page 30 are shown a number of gravure presses. Among them are roll-to-rewind, roll-to-folder, roll-to-sheet, and sheet-fed presses.

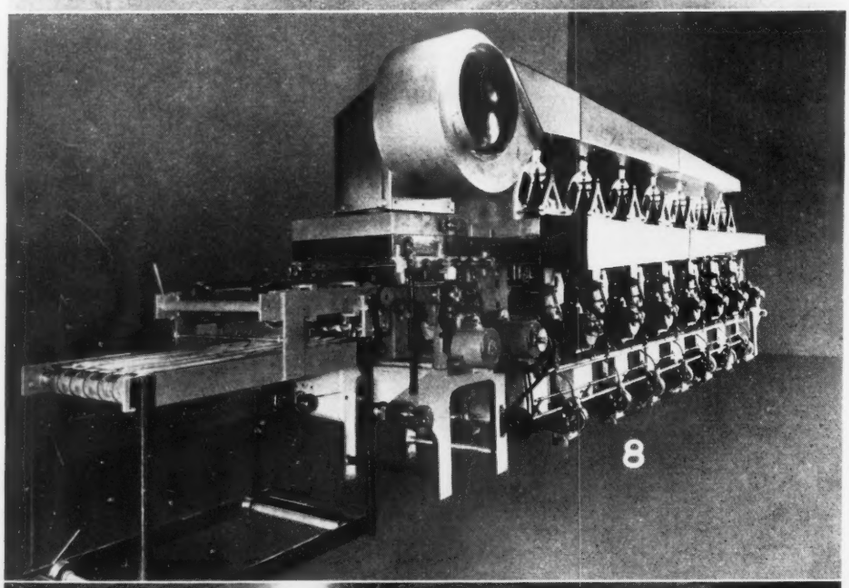
5



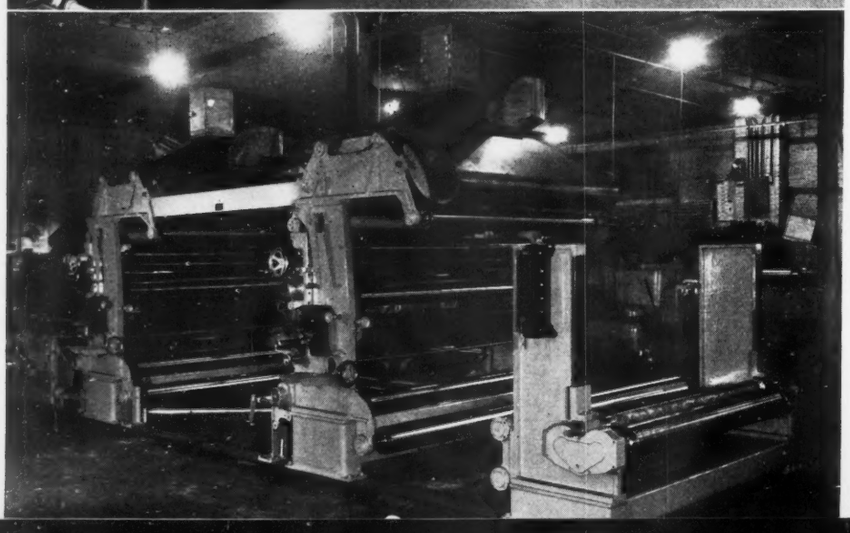
6—Hyroto Rotogravure Press—This is a view of a stripped-down Hyroto press with 30 in. web width. It is used for specialty printing which includes glassine, cellophane wraps, labels, or for printing on all types of materials in rolls. Will print on one or both sides of the web. Speed of operation is up to 600 f.p.m.



7—Miehle No. 44 Sheet-Fed Gravure Press—Present installations have been used mostly for printing advertisement folders, book inserts, greeting cards and other work in single and multi-color jobs. Presses have also been used for printing two-color label work and for cartons. Maximum sheet size, 29 in. by 43 in.; minimum sheet, 16 in. by 19 in.; maximum design surface, 28½ in. by 42 in.; speed range, 3000 to 6000 i.p.h. Design based upon unit principle permitting installation of single or multi-color press or addition of additional units at a later date. Automatic sheet feeding by Dexter Stream Feeder. Register obtained by Miehle rotary gripper which takes sheet from feed table after it has been front and side guided, and transfers it to impression cylinder at exact cylinder speed. Reciprocating doctor blade. Hot air drying equipment. In the delivery conveyor is incorporated additional drying means to supplement the drying action resulting from long travel from cylinder to delivery pile.



8—Richmond Rocket Rotogravure Press—Manufactured by Inta-Roto Machine Co. and handled through H. H. Heinrich, Inc. Built for the packaging field in widths of 20 in., 30 in. and 40 in. with roll feed-sheet delivery supplied in tandem units; installation can consist of one unit or up to four or more as required, or units may be added later. Web speeds vary depending upon type of work and type of stock. On average label job where lacquering is included, presses will operate at average web speeds of 400 to 500 f.p.m. New design Richmond Rocket presses are designed to permit the operator to walk between each color for adjustment of the doctor blades, web rethreading and removal or replacement of cylinders.



9—Klingrose Rotogravure Press—This stripped-down view shows a Klingrose one-color perfecting or two-color one-side rotogravure press. Width, 64 in., web speed, 350 f.p.m. Klingrose Type P presses are suitable for label printing, and Type HD presses are suitable for all-over decoration. All multi-color units have 360 deg. register, ink pumps, air dryers, and roll-to-roll winders or sheet cutoff. Max. printing widths range from 32 in. to 62 in. Min. cyl. circumf., 15 in. to 18 in. Max. cyl. circumf., 31 in. to 37 in. Web speeds (according to type of press) 350 f.p.m. to 1000 f.p.m.

possible. With the Dultgen process engravings can be duplicated again and again. Actually, among commercial printers, the difficulty isn't in the engraving. The real difficulty lies in proving. Rotogravure printers have found it necessary to prove printing cylinders for a new job on the production press with the inks and at the speed with which the job is to be produced. In the case of publications, most shops do their own engraving and some have proving equipment. But in the packaging industry, the printer depends upon outside sources of cylinder supply. And when a cylinder fails to prove up on the production press, he is forced to return the cylinder to the trade platemaker for correction. This procedure keeps his press down until the cylinder is returned. It is to be assumed, of course, that cylinders could be proved on other than press operating time, but no ready solution has as yet been found to this problem. There are several highly competent commercial intaglio engraving houses in existence and they are giving this particular aspect of the situation their most careful consideration and study. We hope that some solution comes forth.

The principal purpose of this article is to demonstrate that rotogravure is in use, is practical, and is well adapted to high-speed multi-color printing. We believe that examination of the supplements and magazines mentioned will prove these contentions. The speed figures offered are factual, are based on experience and there is no question that greater speeds are contemplated.

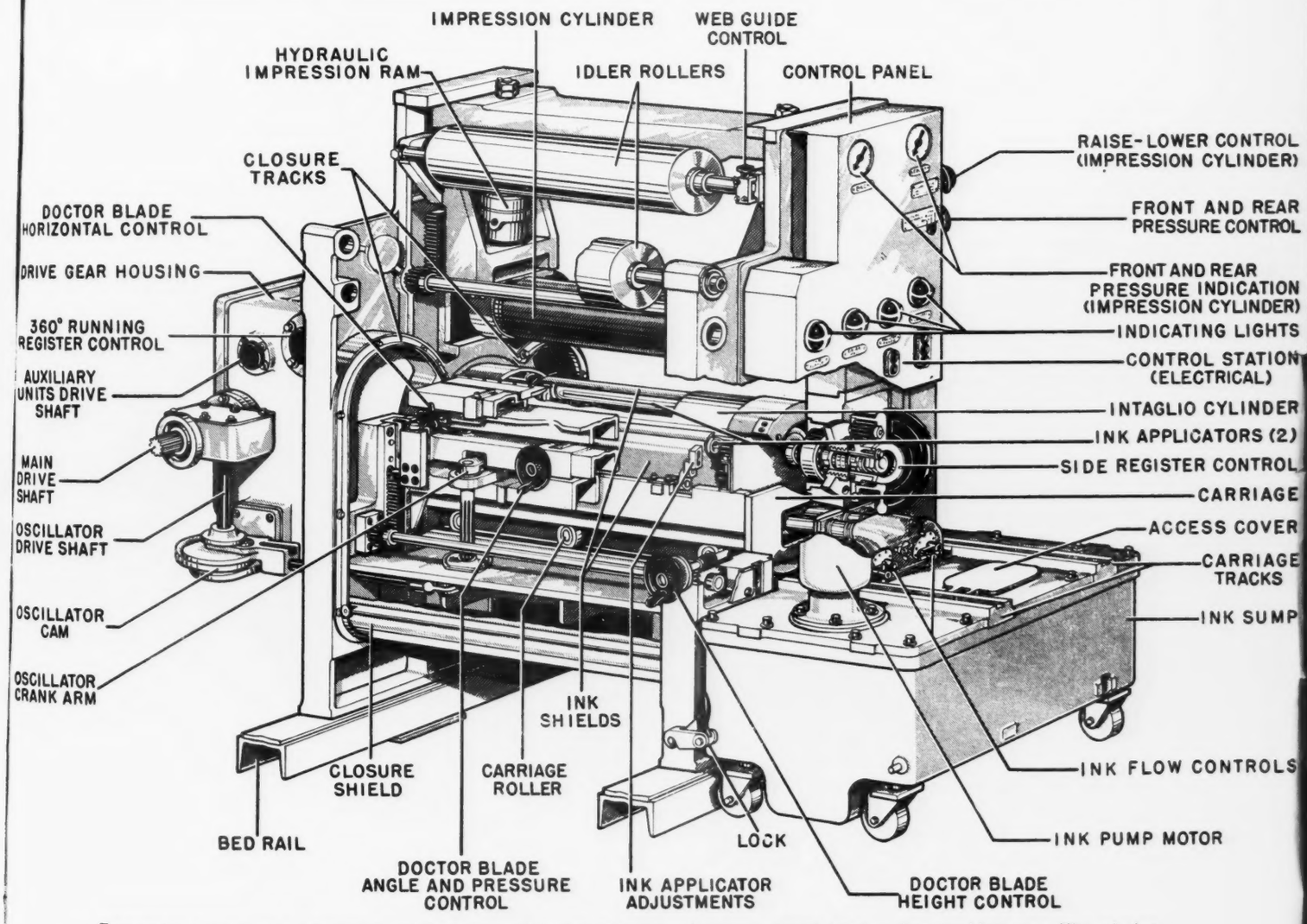
In the Packaging Field

In the packaging field particular attention is invited to the enormous production of foil labels and wrappers. Certainly the printing quality and the established production speeds may well be applied to paper label and wrapper production. As a matter of fact, several paper labels and wrappers, and an abundance of wrapper material used in the bakery packaging industry, are being produced by rotogravure.

In the carton field the results obtained on Jell-O, Beech-Nut, American Chicle, etc., will arouse the interest of box makers. This is another field for rotogravure and is really only in its infancy.

Progress in the Graphic Arts is inevitable and rotogravure stands ready to make its contribution. That contribution has already been made in the production fields cited.

(To be Continued)



Perspective diagram of a rotogravure printing press, with part of frame and covers stripped away to show working parts. The printing cylinder is shown mounted in its carriage. To permit removal and replacement of the cylinder, the carriage may be pulled outwardly to the right. This arrangement also permits inspection of the cylinder and pre-run adjustment of doctor blade. It will be noted that the doctor blade is adjustable to the cylinder for horizontal position, angular position and for pressure. Ink is contained in the sump at lower right. The motor mounted on top of the sump or tank operates a pump within the tank. In turn, through hose connections, the ink is sprayed against the printing cylinder, the doctor blade removing all ink from the surface of the cylinder before it contacts the paper web, leaving ink only in the depressions. The ink in the wells is removed both by contact with the paper under pressure and by capillary attraction. During production operation, the inking mechanism and all of the cylinder except a narrow section extending across the top part which contacts the paper web are totally enclosed.

Miniature reproduction of dummy form used in plant of the Scranton (Pa.) *Tribune* and *Scrantonian*, published from the same plant. *Tribune* is morning paper and *Scrantonian* is a Sunday paper. Advertising and editorial departments co-operate in making up complete dummy of all pages so the Composing Room will have no difficulty in placing advertising and editorial articles. The two papers contain eight columns per page, each column is $21^3/_7$ in. or 300 lines deep. The dummy sheets shown above each measure 17 in. by $12^3/_4$ in. laid out to represent two pages of the newspaper on each side, or four pages to the dummy sheet. At each side of the page (vertically) the depth is marked off by inches and by agate lines. In the accompanying article the workings and utility of the dummy are explained.

Do You Use a Dummy?

Here's how it works in one newspaper plant

By DR. RUSSELL RAYMOND VOORHEES

WHO makes up a publication? Well, if it's a monthly or a weekly, the chances are a thousand to one that the editor dummies up the publication and the printers follow the dummy in making up. In the daily newspaper field no out and out answer like that can be given. In some plants the printers make up the newspaper without benefit of a dummy. Just why, has never been established. In other newspaper plants there is some co-operation from the editorial and the advertising departments. In still other plants there is a sort of makeshift dummy prepared. But in the plant of the Scranton (Pa.) *Tribune*, published every morning except Sunday, and the Sunday *Scrantonian*, the editors and the head of the advertising department make up the whole paper. And to make certain that their makeup is followed each issue of these newspapers is completely dummied up. These papers published by the Scranton Republican Pub. Co. of which M. L. Goodman and Richard Little are co-publishers, use a complete dummy. It is a system that has many advantages for the men in the plant itself. It is a system worthy of the attention of other newspapers not now using the dummy system.

These two Scranton papers contain eight columns, each column being $21^3/_7$ in. or 300 lines deep. The basis of the dummy used in this plant is a sheet measuring 17 in. by $12^3/_4$ in., ruled and laid out to represent two pages of the newspaper in miniature on each side or four pages to the sheet. At the top of each dummy page there is a space for the entrance of the page number and the date of issue. The columns are marked off and along both left and right-hand edges the inches and lines are also marked off, the inches in bold face numbers and the lines in lighter face and smaller size type. The inch and line marks on the left-hand edges start at the top of the sheet while those on the right-hand side start at the bottom. The reason for this will be apparent when it is mentioned that each issue is completely dummied up, both for news matter and also for advertising. Since advertising is sometimes laid out from the top down, although more generally from the bottom of the page up, it was felt wise to provide for the two methods of numbering on every page. Also, it must be remembered that these forms are used for dummying up the news matter, too, which is done from the top of the page down in most instances.

Every day two complete dummies are made up of the paper for the following day. That means that there are two complete dummies made up for the Scranton *Tribune* every week day and once a week two complete dummies are made up for the *Scrantonian*, the Sunday morning issue.

Enough of the double sheets are taken to give a dummy of the proper number of pages. For instance if the issue for the following day is to be a 16 page paper, then four of the double sheets will be used to make each dummy. With four double sheets and with each sheet containing representation of four pages, there is a total of 16 pages. If the issue is to be an 18 page paper, then an additional half of a double sheet will be used to make up each of the two dummies.

After it has been determined what will be the size of the next day's issue, this being influenced, of course, by the volume of advertising booked for the issue, the advertising department makes up the two complete dummies. The several double sheets that go to make up each dummy are stapled together so as to form a stitched dummy. Then the advertising department marks one dummy *Composing Room* and the other *Editorial Room*. Each is written in pencil at the top of the first or outside page of the stitched dummy. The pages are then numbered at the left-hand top corner of each page and on the right-hand top the date of issue. Then the advertising department marks off every advertisement that is scheduled for that issue, locating it in the exact position it is to be put in the made-up page. The measurement guides at both left and right sides of each page form are used in marking off the advertisements. In the dummy that goes to the *Editorial Room* only the size of each advertisement is indicated. No other notation is made. However, in the dummy that goes to the *Composing Room* each piece of advertising is not only laid out where it is to go in the makeup but the size is also noted and the advertiser's name, as well. This, of course, is necessary so that those making up a page will know whose ad goes where.

When both dummies have been marked up as indicated, the dummy marked *Composing Room* is sent to the composing room and the dummy marked *Editorial Room* is sent to the managing editor of the paper. The dummies are sent through about 3 o'clock in the afternoon for the daily issues. For the Sunday *Scrantonian* the dummies come through Friday night of every week for the coming Sunday's issue.

When the dummy for the Scranton *Tribune* reaches the managing editor's desk at 3 o'clock on a week-day afternoon he has before him a complete dummy for the coming day's issue and knows how much space will be taken up by advertising and how much space he will have

(Continued on Page 74)

Thermoplastic Coated Papers

Development of delay action thermoplastic eliminates necessity for applying heat and pressure simultaneously to label papers — Can be applied to any of the ordinary papers used in Graphic Arts industries

By JAMES R. CARTER II*

**Sales Manager, Nashua Gummed and Coated Paper Co., Nashua, N. H. Abstract of address delivered before Chicago Section of Technical Association of Pulp and Paper Industry, March 1948*

ABOUT eight years ago my Company inadvertently stumbled into the field of thermoplastic coated label papers. It is another instance of a notable development resulting as a by-product of another unrelated research project. Inasmuch as we were specialty coaters, it was a natural line of action for us to pursue. As has been said so often before, this is another case illustrating the old adage of "seven years from test tube to market."

I am referring to my company's development of a delay-action thermoplastic. This means that the necessity of applying heat and pressure simultaneously has been eliminated. Nashua's Thermo-Kote heat-seal papers can be activated and then applied like a pressure-sensitive adhesive. In the independent activation phase, one can satisfactorily treat with three of our variables, time, temperature and the insulating property of the paper or film. After heating, the thermoplastic adhesive goes into and remains in a pressure sensitive stage for an extended period of time. When ready, it can then be applied separately with the required amount of pressure. This has given great leeway and freedom to machine builders. As an example there is now one type of automatic heat seal bottle labeller in commercial production which is labeling 300 bottles a minute. Numerous other machine developments are now in process or on the market as perfected machines.

Desirable Properties

Now, let us consider what characteristics research has indicated as being most desirable in thermoplastic label papers. These are as follows:

I. A Relatively High Blocking Resistance Point. By this we mean the point at which one begins to get cling between two or more labels. The actual blocking point is normally higher than the blocking resisting point. Thermoplastic label papers currently on the market range in this respect from some which are practically pressure-sensitive and actually block at 70 deg. F. (under 10 lbs. p.s.i. pressure for one hour) to 150 deg. F. under similar test conditions. On the various thermoplastic label papers developed by my company the range of blocking resistance points is from 115 deg. to 125 deg. F. (under 10 lbs. p.s.i. pressure for 1 hr.) with the exception of one special purpose label developed for the textile field with a blocking resistance point of 110 deg. F.

II. A Relatively Low Complete Activation Point. In this connection we refer to the effective activation point or the actual temperature of the thermoplastic coating. Obviously the lower the effective activation point of the thermoplastic coating itself, within safe ranges, the more one minimizes insulating problems with respect to properties of the paper or film being used. In this connection what one should seek is an abrupt passage from the free point to the complete activation point. My company's thermoplastic label papers of various formulations activate effectively within a range from 170 deg. to 185 deg. F.

One interesting thing that has been discovered during the course of our development work has been that apparently due to our approach to this thermoplastic problem, we can apply heat directly to the thermoplastic coating, without a build-up on the heating element. This method of activation completely eliminates the variable of the insulating properties of the paper or film.

In the normal application of heat to the non-thermoplastic coated side of the paper or film, it must always be borne in mind that a higher heat must be delivered to the uncoated face of the label, than the minimum effective activating temperature required for the thermoplastic coating. It should also be obvious that a higher temperature reading may be required on the thermostatic control setting in order to insure an adequate effective surface temperature on the activator.

Relatively Wide Band of Effective Temperature Range

III. A Relatively Wide Band of Effective Temperature Range. There is a minimum point of effective activation and there is also a maximum point of effective activation beyond which the thermoplastic adhesive becomes too liquid or tends to penetrate into the fibers of the sheet and lose its optimum adhesive properties. On many of the older types of conventional thermoplastics this band is quite narrow with resulting operational difficulties. It is interesting to note that the width of this band of effective activation varies with the types of surfaces that the thermoplastic label is to be adhered to. On a coarse, porous material such as chip-

(Continued on Page 70)

PRINTING ON PLASTICS

BESIDES the better known thinner plastics, rigid plastic sheeting is obtainable in continuous roll form in thicknesses from 0.005 in. to 0.030 in. Either in roll or sheet form plastics may be decorated by several processes, depending on the character of the original image and the number of copies wanted.

Short runs may be done by the silk screen process or by airbrush spraying in gangs through stencils, by regular letterpress, from either metal or rubber plates or type, dry offset (regular or on a power offset proof press) or by gravure. All of these methods are adaptable to printing on plastics in sheet form. So is the aniline process as the web may be sheeted after printing.

Longer runs are printed either by the aniline process (letterpress on very fast presses from rubber plates or by rotogravure, both from the roll). The aniline process is well suited to even comparatively short runs and very long runs are obtained from rubber plates—beyond a million impressions having been reported. Rotogravure yields very long runs and is superior to aniline in reproducing fine halftones. On extremely long runs rotogravure excels aniline in speed so far but further expected development of aniline inks may make it possible to run as fast as in rotogravure.

Special printing inks suited to the plastic chosen, the press and the form are necessary. If the silk screen process is employed, special silk screen colors compounded for the plastic chosen are needed, and for spraying singly or in gangs through or without stencils a thinner medium adapted to the airbrush or spray gun.

In the illustration at the left is shown the Holleman portable electric hoist for handling newsprint rolls in plant of the McAlester (Okla.) *News-Capital*. A roll of newsprint is about to be rolled onto the hoist frame. It is brought to rest against the diagonal part of the frame, then a valve is turned to permit the hydraulic hoist to lower the roll to the ground or platform, as the case may be.

In this right-hand illustration, the paper roll has been lowered hydraulically from the truck. Time of loading and unloading operations is from 8 sec. to 9 sec. The maximum lift capacity of the hoist is 2000 lbs. A 2 h.p. motor operates the mechanism. Hydraulic pump has a pressure of 1000 lbs. Hoist may be fastened to rear end of automobile by chain seen on hoist frame at right for transportation. Hoist is adjustable for delivery height.

Carrier Between News and Composing Depts. Portable Electric Hoist for Newsprint

By DR. RUSSELL RAYMOND VOORHEES

WHEN two problems presented themselves in the plant of the McAlester (Okla.) *News-Capital*, Bill Holleman, pressroom foreman and machinist, overcame both by coming up with the answers. One of these is a two-station carrier system designed and built by Mr. Holleman. He installed the carrier between the editorial and advertising departments and the composing room both of which are on the same floor. The carrier has saved lots of walking that was formerly done in order to get copy, proofs and stereotype mats to and from the composing room.

As will be seen from the accompanying illustration, the carrier rides on two tracks made of channel iron (1 in. by ½ in. flange) spaced 6 in. apart in which the four ball bearing wheels of the carrier ride. These wheels are rubber tired to kill noise when the cage rides in the track. The tracks are elevated well above head level between stations with the track sloping downwardly at each station within easy reaching distance from the floor.

The wire carrier cage is fitted with a hinged lid which is fastened to the cage at the opening end by a snap spring. This spring prevents loss of copy, mats or proofs while the cage is in motion.

There is a push button at either station, forward and return. The basket is pulled by No. 10 sash cord (there are 135 ft. of it). Approx. 45 yards is the distance covered by the round trip with 22½ yds. between stations.

Transmission is by continuous sash cord which works in a grooved pulley at either station. The grooved pulley in the composing room is motivated by a ¼ h.p. electric motor with reduction pulley to reduce the speed of the motor. Magnetic controls are used. Between the tracks at either station there is a cutout switch which cuts out the other controls in case they fail to work. A recoil spring is mounted at either station to act as a bumper in case the controls fail, thus preventing damage to the cage.

Portable Hydraulic Hoist for Newsprint

The handling of newsprint rolls in the smaller newspaper plant presents something of a problem if it must be stacked up for storage and if floor space isn't available. In the plant of the McAlester (Okla.) *News-Capital* it became such a problem that Bill Holleman, pressroom foreman and machinist designed and built a portable hydraulic hoist which has saved plenty of tough labor in that plant and has more than proved its worth.

The hoist is extremely mobile. It can even be hooked onto the rear of an automobile and transported wherever it may be needed. It has been pulled by a car at 50 and 60 mi. per hr. It will handle up to 2000 lbs. at a time. It is electric-driven, power being obtained by plugging into a regular electric outlet. A sufficient

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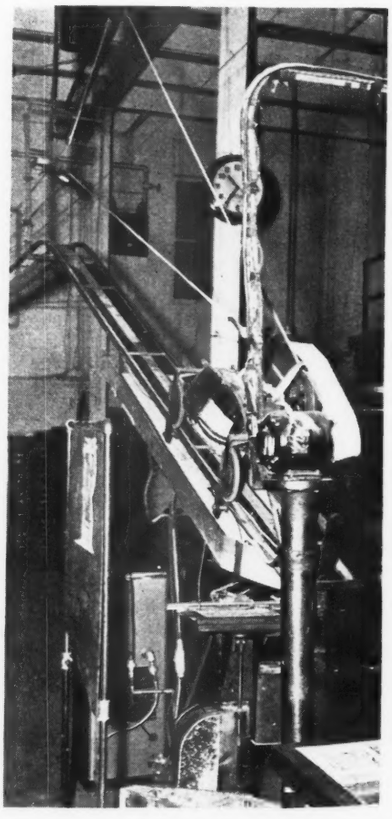


View of copy, proof, cut and stereotype mat carrier installed in plant of the McAlester (Okla.) *News-Capital*. Operating on one floor between offices and composing room, the carrier was designed by Bill Holleman, Pressroom Foreman and Machinist.

EQUIPMENT & SUPPLIES

Sperry Rotary Letterpress

THE Sperry Corporation announces installation of the first of its new Rotary Letterpresses. Three Sperry Letterpress Printers, each equipped with three color units and a new rotary die for cutting and creasing the Pure-Pak paper board milk containers, have been delivered to the Kieckhefer Corporation at Delair, N. J. Current production of carton blanks is reported to be around 1000 per min., two-across web, individual blanks measuring approximately 11½ in. by 13 in. Completed cartons, printed in one, two or three colors, creased, cut with waste removed, are said to be produced in one continuous operation at speeds of 500 to 600 f.p.m. Inks used are of the steam setting variety.

The roll stand of the new Sperry Rotary Letterpress employs a new method of roll handling, without the use of core shafts or overhead crane. Of the 'turn-over' type, it permits new stock rolls to be brought to the run-off position without stopping the press. Carton stock is fed through a series of feed and side guide controls for consistent side trim accuracy, producing square and accurate blanks.

The color units are roller mounted, permitting removal to a dolly, out of the web path. This makes possible makeready off the press while the mounted color units are running another job. This feature in itself is claimed to save from 75 to 90 percent in letterpress makeready time.

The ink fountain features a crank operated slide mechanism which backs the blade and ink reservoir away from the duster roll, permitting easy access in washing up. All ink distributor and form rollers are thrown off in one operation by a lever.

Running register control is reported to be easily accessible and simple in operation for each color unit. Impression pressures, adjusted with micrometer precision, can be released and again established by means of a positive lock device.

Size changes are accomplished by changing plate and impression cylinders. Circumference range starts at a minimum of 16 in. with a maximum of 32 in. Impression and plate cylinders are bearer mounted and their design is left to customer specification. Either metal or rubber plates may be used.

All moving parts in the Sperry Letterpress are ball-bearing mounted, since these presses are designed to run at speeds upward of 1000 f.p.m.

Designed for application in the specialty field, the Sperry Rotary Letterpress is delivered equipped with rewind, rotary sheeter and pile delivery, or rotary cutters and creasers for carton production.

The universal use of ball bearings and multiple shaft mounting according to manufacturer, are designed for long life with smooth, vibration-free operation at greatly reduced maintenance costs.

The rotary die for cutting and creasing, it is announced, is particularly suitable for long runs.

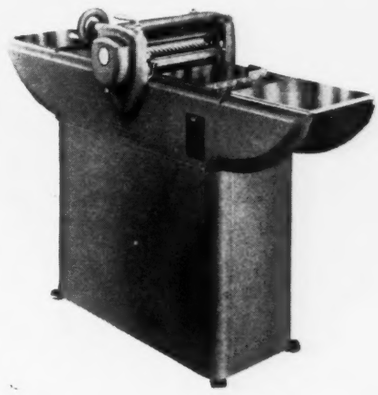
12 In. By 15 In. Rotary Shaver

PRODUCTION of a small size rotary shaver that planes wood or metal is announced by the Monomelt Co., Inc. Named the Rotashaver, it planes all flat work—stereotypes, electrotypes, zinc engravings, plastic plates, stereo base and *wood* base. This shaver is claimed to shave rapidly and precisely.

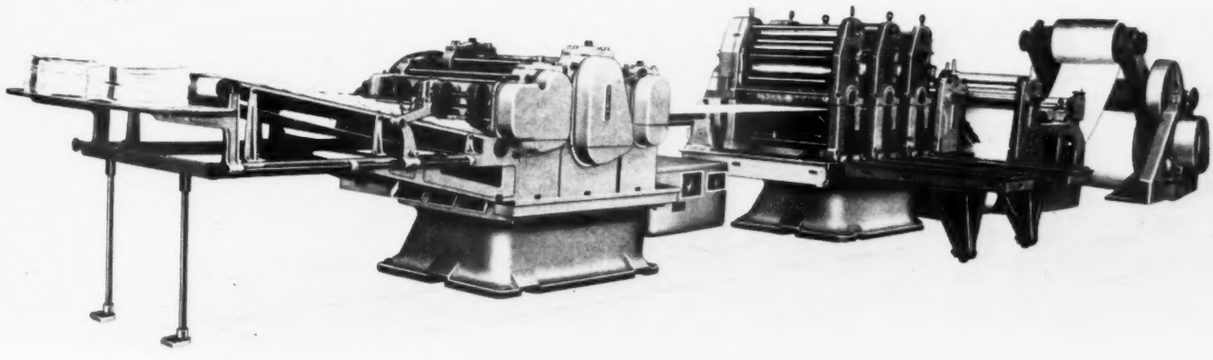
Designed to handle plates or blocks up to 12 in. by 15 in. or 6 column newspaper size, the Rotashaver also takes a full bed of small plates. It is claimed that the specially designed bed cornice solves the thumb nail shaving problem—with no buckling, breaking or biting.

Plates to be shaved are placed face downward on the smooth bed. The cutter head is raised and lowered by turning the elevator wheel on the head to the proper height as indicated on the micrometer. Height range is from .055 in. to .940 in. When the starter switch is engaged, the table passes under the whirling high speed helical cutter to shave the plates.

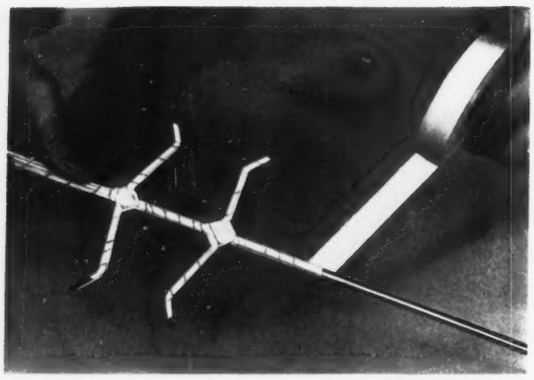
Some of the physical details are as follows: (1) One-piece cutter head mounted on heavy duty Timken ball bearings. (2) High carbon steel cutter with 10 spiral teeth has two-point suspension for rigid support. (3) Built-in precision micrometer enclosed in the side of the cutter head to avoid bumping it. (4) Adjustable hold-down fingers which grip plates across entire width, regardless of thickness, to avoid shaving vibration. (5) Large chip-catcher eliminates flying metal—automatic vacuum exhaust chip disposal system optional. (6) Cast iron web table rests on cast iron bed and ways. (7) Spring-mounted idler pulleys snap back and throw off belt or allow it to slip if shaver is overloaded. (8) Work tables provided at either end to rest work on. (9) Two h.p. motor, 60 cy., 3 ph., 220-440 v. a.c. provides power for table and cutter. (10) Dimensions: length 70 in. overall, width 24 in., height 40½ in. to work table—50 in. overall. Shipping weight approx. 1600 lbs.



View of Monomelt's new 12 in. by 15 in. Rotary Plate Shaver. Planes all flat work—stereotypes, electros, zinc engravings, plastic plates and wood base.



View of Sperry Rotary Letterpress Printer, one of three delivered to Kieckhefer Corporation in Delair, N. J. Press is equipped with three color printing units and a new rotary die for cutting and creasing Pure-Pak paper board milk containers. Color units are roller mounted, permitting removal to a dolly out of the paper web path. This makes possible makeready on the unit off the press while the mounted color units are running another job. Shown in the illustration are two dollys alongside the three color printing units which are in printing position. Either metal or rubber plates may be used. In this installation, the inks used are of the steam-setting variety.



Electroplating Tape announced by MM&MCo. is designed as a wrap insulator for electroplating racks and for blocking off parts during plating.

Electroplating Tape

A TAPE designed as a wrap insulator for electroplating racks and for blocking off parts being plated, is being distributed by Minnesota Mining and Mfg. Co. The plastic film tape is offered in yellow, black and white films. All are reported to have excellent resistance to acids, alkalies, water, salt water, alcohol, aliphatic hydrocarbons, and oils. The yellow variety was specially formulated to give it the further chemical resistance necessary to meet the severe requirements of the electroplating trade.

Designed to have sufficient flexibility to mold tightly to irregular surfaces, the tape has an elongation at break of 175 per cent, with stretch in the transverse direction slightly higher. Tensile strength is 30 lbs. and adhesion is 30 oz., both per inch of width. Thickness is seven mils.

The tape is provided in 36-yard rolls, in widths from ¼ in. to 22 in.

Laboratory tests reveal an insulation resistance of 50,000 megohms, and a dielectric strength of 10,000 volts. It is incombustible, non toxic, and odorless.

The yellow tape is claimed to provide insulation protection in plating operations such as zinc, silver, bright chrome, industrial chrome, cadmium, copper, nickel, pickling, descaling, electro-cleaning, electrolytic polishing, anodizing, alkaline cleaners, electrical currents, hydrofluoric acid etching and other etching solutions.

Goss Shipments—Lacure Promoted

The Goss Printing Press Co. reports that under Goss management the Duplex plant broke a record recently when it shipped five Unitubular, four Standard Tubular, and three Model E Flatbed Presses and a large amount of stereotype equipment during a 30-day period. This was the heaviest month in the 63-year history of the Battle Creek factory. Included in the record month were a 16-page Unitubular press for the Cleveland *Shopping News*, and a 4-page Unitubular unit for the *Peninsula Herald*, Monterey, Calif. A 20-page Unitubular press went to Madras, India, an 8-page Unitubular to Istanbul, Turkey, and another to Tel Aviv, Palestine.

The Midland (Tex.) *Reporter-Telegram* got a 16-page Standard Tubular Press and the Pepper Printing Co., Gainesville, Fla., received a 12-page Standard Tubular. Four-page Standard Tubular units went to *Catholic Action of the South*, New Orleans, La., and Paducah (Ky.) *Sun-Democrat*.

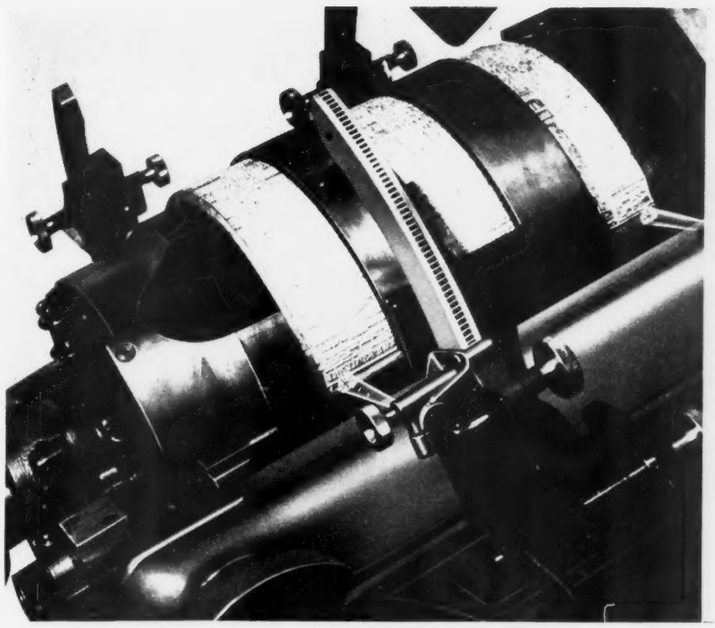
Earl Lacure recently has been made head of inspection. He supervises erecting floor of Goss Duplex Div. of Goss Printing Press Co.

Model E Duplex flat-bed presses were shipped to Ukrainian National Association, Jersey City, N. J.; Johannesburg, South Africa, and Benares, India.

The erection and testing of all this equipment in the Duplex Division plant was under the direct supervision of Earl Lacure, a veteran of 27 years in the newspaper business, mostly on the mechanical side. Lacure joined the Duplex organization 13 years ago as an erector and later was placed in charge of field erection and engineering. Recently, he was made head of inspection, supervising the erecting floor of the Goss Duplex Division.

Intertype Corporation announces a new 24 page booklet on its Model F Mixer machine. Treated in text and illustration are the possibilities of mixed composition, finger-tip changes from one magazine to another, replacing magazines, continuous distribution, the power-operated magazine shift, several pages showing sample matrix layouts, and a listing of the features of the SE Intertypes. Copies are available on request from Intertype Corporation.

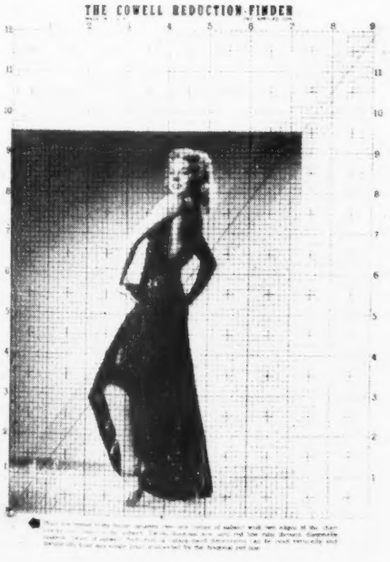
Shrink-O-Matic Mat Shrinker or Pre-Shrinker—Platemakers Equipment Co. announces the Shrink-O-Matic Stereotype Mat Shrinker. The machine is intended for processing the matrix either before or after packing, but before the final baking in a former or curved scorcher. Manufacturer claims it will give all the shrinkage wanted depending upon the moisture content of the matrix. It is fully automatic after the mat has been placed in the machine. Heat is provided by strip heaters so arranged as to give heat distribution over entire area of the drying surface. Closing the lid automatically starts the timing interval. As the preset timing device has finished its cycle, the matrix is ejected into a hopper in front of and at the base of the machine. Timing range is up to 3 min. in sec. Heat range, 200 deg. to 500 deg. Further information may be secured through *Printing Equipment Engineer*.



Close-up of Wood Stereotype Curved Color Plate Pre-Registering Machine shown at left above. With this machine each plate in a set of newspaper stereotype color plates may be pre-registered and trimmed ready to be put on the plate cylinders of the press. The machine has been designed to utilize light rays, instead of the mechanical pointers with which the machine was originally equipped, to register all plates in a set of four-color stereotype plates before sending them to the pressroom. At left and right of the plate in the left-hand picture can be seen the light beams being projected from two of the four indicating devices upon the register marks in the plate itself. Each indicator contains a light source directed through a series of optical lenses, one of which is engraved with a cross-hairline which is matched up with the register mark in the plate.

The Wood-Pre-Registering Machine trims two curved edges and one straight edge on all the plates in a set of color plates, to coincide with the copy on the printing surface. Thus the plates arrive in the pressroom in hairline register with each other ready to be locked on the cylinders.

Each of the four indicating devices is individually adjustable longitudinally and circumferentially with respect to the printing plate. As is explained above, this method eliminates possible error because of parallax, or any damage to the printing surface. The indicators are outside the path of the cover which is closed during the trimming operation (shown above in the right-hand picture) so that once the indicators are set for a color series they need not be moved as the cover is closed for the trimming of each plate. Registering device is claimed to be accurate.



Cowell Reduction Finde.

THE Cowell Reduction Finder consists of a transparent plastic sheet, 10 in. by 14½ in. size. Printed upon the sheet in red ink is a chart divided into inches (9 in. by 12 in.). The inches are further subdivided into ⅛ in. squares. A plastic arm fastened to lower left-hand corner by a grommet is centrally imprinted with a heavy red line. This instrument is intended for use by anyone who must scale down or up illustrative material before sending it to platemaker or printer. Can be used by plant executive, the art department or in the office.

The instrument enables the one using it to determine at a glance the size of the copy or subject after enlargement or reduction. The instrument also permits him to see the portions of a picture he might want to save and shows him where to crop. Gives actual dimensions of copy space from oversize drawings.

The instrument is simple to use. The lower left corner of the finder is placed squarely over the corresponding corner of the subject with the edges of chart and copy in alignment. The arm is now swung diagonally until its red line intersects the opposite corner of the subject. Reductions or enlargements can be read vertically or horizontally from any single point intersected by the diagonal red line on the arm.

Printing Equipment Engineer will be glad to forward your request for further information.

Book Again Available

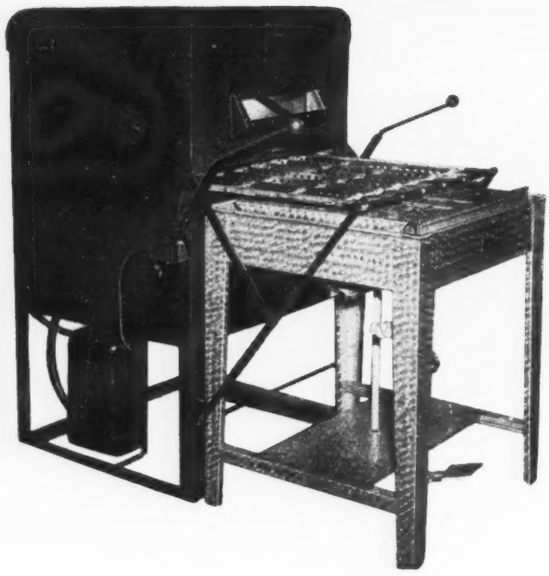
A SECOND printing of *Intertype Book of Instruction* makes this 498 page 6 in. by 9 in. book again available to Intertype users and schools of printing. Well illustrated with 222 drawings, the book covers the function, care, operation and adjustment of Intertype machines. Bound in blue cloth with gold-stamped cover. Copies may be ordered from Intertype Corporation, Brooklyn 2, N. Y., at $5.00 per copy.

Lens-O-Matic Aperture Control

AMERICAN Type Founders Sales Corp., has acquired exclusive world rights for the manufacture and distribution of the Lens-O-Matic Halftone Aperture Control. It is claimed Lens-O-Matic enables the photoengraver and offset-lithographer to obtain every tone in the original copy from brilliant highlight to deep shadow detail. The control is designed to close the lens aperture at the proper speed for every tone.

The control can be used with any correct camera exposure system on either wet plate, dry plate or film, according to ATF, and will operate the diaphragm of a process lens, whatever the make or size. The device eliminates the necessity of the camera operator timing each individual exposure for highlight, middletone and shadow detail.

Further details regarding Lens-O-Matic can be obtained from any ATF branch office, or *Printing Equipment Engineer* will pass along your request.



View of Chemco Photo-Engravers' Electric Infra-red Burning-In oven with Plate Cooler. Largest zinc or copper plate that may be handled measures 24 in. by 24 in.

Chemco Photo-Engravers' Electric Burning-In Oven

THE Chemco Electric Combination Burning-In Oven and Cooler (with infrared heating elements) is designed to be operated in photo-engraving plants where gas is unavailable or where a slower powdering and burning-in operation seems more desirable. In it are arranged 24 infra-red bulbs (375 w. ea.) which heat the plate from top and bottom. The oven is insulated against drafts and heat loss. An important feature of the oven is that a window of tinted heat-resistant glass permits inspection and control of the plate burn while preventing blinding glare.

The largest plate which may be handled measures 24 in. by 24 in. Floor space required is 32 in. by 60 in. Water and drain connections ¾ in. May be operated on 110 v. or 220 v. a.c. or d.c. current.

Machine is designed for burning-in either powdered zinc plates, or the hot-top enamel used on copper. Manufacturer states the oven will burn-in plates evenly regardless of size. The plate to be burned-in is placed on the plate holder which runs freely in and out of the oven. When the plate holder has been slid fully into the oven the current is automatically turned on. When the holder is withdrawn, the current is cut off. Current is consumed only while burning-in a plate. The plate cooler is constructed wholly of stainless steel. Arrangement of water flow is such that it cools the plate instantly.

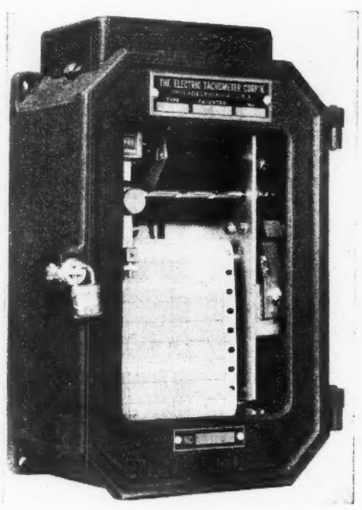
The oven itself is fabricated in two sections. The upper section may be raised to expose the 24 infra-red lights for examination of replacement.

Ruggedly constructed with heavily insulated wire with ample safety factors on switches and all connections.

Further information may be secured from Chemco Photoproducts Co., direct, or *Printing Equipment Engineer* will gladly forward your request. Two illustrated bulletins available upon request.

Electric Tachometer Recorder

A SPEED and production recorder (Model R-300-H) has been announced by the Electric Tachometer Corp. The gear-driven unit is electrically operated and produces a permanent record of speed and production on any industrial machine. The recorder consists essentially of a synchronizing contactor which may be attached to and driven by the prime mover or industrial machine. A step-by-step motor in the recording instrument is electrically connected to the contactor and follows its motion. This motor, by means of gears and feed screw, drives a steel stylus across a wax-coated chart. At ½ min. intervals the master clock, an integral part of the system, makes contact to disengage the feed screw which is revolved backwards by a return spring restoring the pen arm to zero. The same contact feeds the chart downward at the rate of 2 in. per hour. This cycle of operations, when repeated, produces a series of parallel lines, the length of which is proportional to speed or production. The ends of the lines form a speed curve.



It is claimed by manufacturer that Recorder produces a continuous record of operating speed, showing the slightest irregularity in speed, as well as idle time. It provides a basis for comparing one run with another, for analyzing the cause of stoppages.

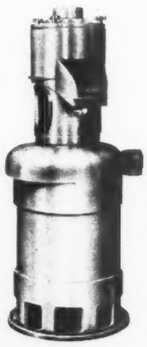
Manufacturer also states the Recorder is not affected by changes in voltage of the supply current, vibration of the machine, temperature, or wear of any parts. The torque at the pen arm is the same for slow speeds as for high speeds. The Recorder is electrically driven, and may be installed at any remote position—the superintendent's office, near the foreman's desk, or in another building.

Complete information may be secured from the manufacturer, or through *Printing Equipment Engineer*.

Morehouse Speedline Ink Mill

AN INK grinding mill based on the Morehouse principle has been announced by Morehouse Industries. Identified as the Morehouse Speedline Ink Mill (Model SB 1402), the unit is specially designed for ink manufacturers. Maker states it has cut production time on such products as anilines, news blacks and comic colors as well as duplicating, burlap and cotton bag and moisture-set inks. Grind may be adjusted to fineness desired without stopping. Cleanup time is claimed to be short.

The unit measures 5 ft. in height by 20 in. diam., and weighs approx. 750 lbs.



View of Morehouse Speedline ink grinding mill. Processing chamber is of polished steel. Critical moving parts, stainless steel.

No special base or mounting necessary. Installation involves feeding and delivery facilities, and plug-in to regular power supply.

Processing chamber of mill is of polished steel. Critical moving parts are made of stainless steel. All parts are claimed to be interchangeable. Motor 220/440 v., 3 ph., 60 cy., 20 h.p. explosion-proof, class 1, group D. It can also be supplied with motor of special voltage and other a.c. or d.c. characteristics.

(Continued on Page 66)

Mechanization *of newspaper mailing room undertaken by Milwaukee (Wis.)* Journal *to keep pace with increased press production*

By JULIAN J. EBERLE*

**Mechanical Engineer, Milwaukee (Wis.)* Journal.

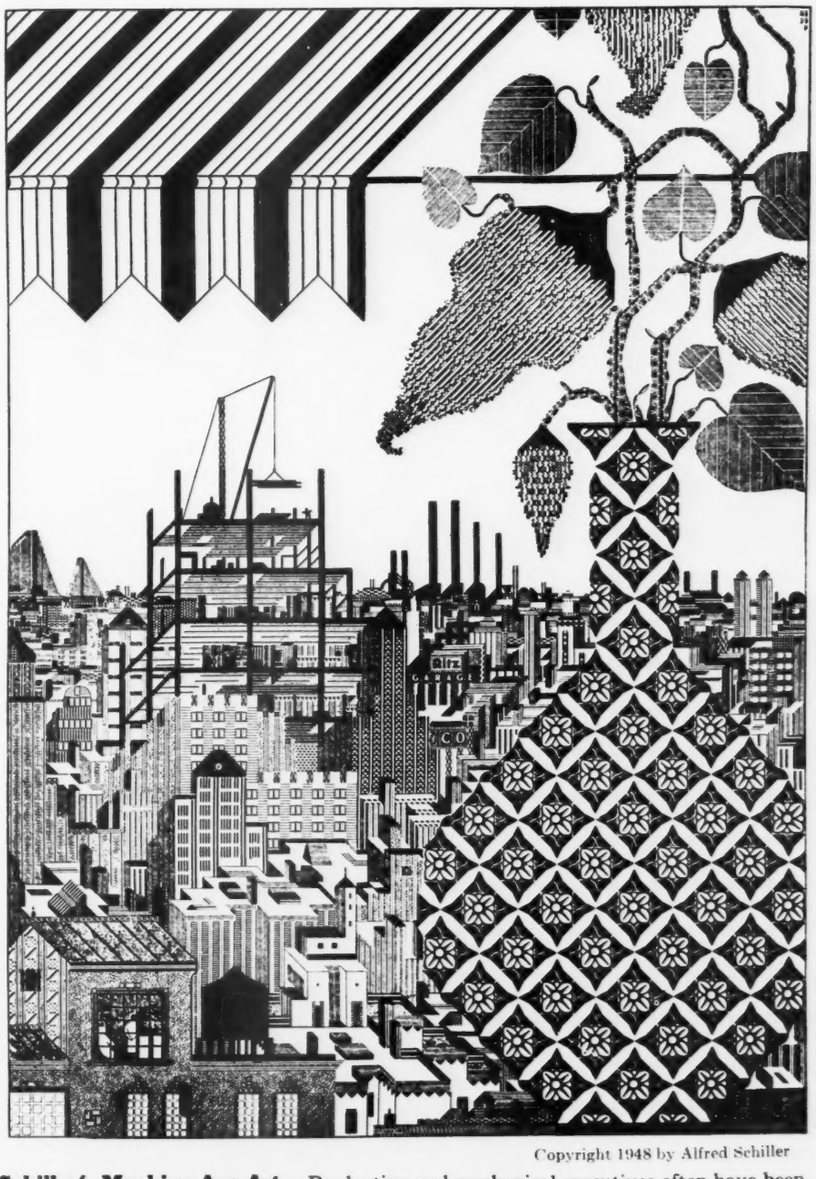
SPECIFICALLY mentioning the fact that mechanical departments of the newspaper (with the exception of the mailing department) have long enjoyed the benefits of mechanization, Julian J. Eberle, Mechanical Engineer of the Milwaukee (Wis.) *Journal*, discussed what has been done toward mechanization of the *Journal's* mailing room at the recent Northwest Newspaper Mechanical Conference held in St. Paul, Minn. Below are printed abstracts from Mr. Eberle's discussion.

WE HAVE three daily editions—The Star Edition, or the Predate, with a run of 19,000 copies is intended for single mail circulation. The Star Home Edition, with 64,000 copies, goes to press at 12:15 p.m. and is distributed throughout the state by our own dealers. Because of our dealer arrangement on this edition, all papers are contained in labeled bundles with a large majority of them requiring an odd count. These wrappers are prepared in advance and each is numbered to indicate its position in the truck loading sequence. Our home delivery circulation of 236,000 copies receives the Latest Edition, which goes to press at 1:30 p.m. The great majority of these papers are wrapped in bulk, unlabeled bundles. Since we do not have collect press runs, our press capacity has limited the size of the paper which can be run at any one time to 48 pages in black and white. This capacity will be increased to 56 pages when present press installation is completed. When we exceed this capacity, we are compelled to run certain sections in advance. These advance sections, or supplements as we call them, are bundled, tied, and shipped out in advance to the various carrier stations throughout the city. They are stuffed into the main sections by the carriers. The supplement sections for the Star Home Edition are counted out, placed with the labeled wrappers, and stored at the conveyor deliveries until the main sections are run.

Five Operations

To design and arrange equipment to handle a product in the manner just described, we divided the Mail Room and truck loading procedure into five operations. These basic operations were: (1) The removal of papers from conveyor deliveries and the preparation of bundles. (2) Movement of bundles to tying machine. (3) Operations at the tying machine. (4) Delivery of bundles to loading position, and (5) Truck loading.

All our conveyors have the so-called upside-down delivery which places the papers on the delivery table with the folded side up. Our mailers were unanimous in their choice of this type of delivery after considerable experience with both types under the old arrangement. The delivery tables are placed at right angles and tight against the working surface of the feeder conveyor because we feel that papers are more easily re-



Copyright 1948 by Alfred Schiller

Schiller's Machine-Age Art — Production and mechanical executives often have been intrigued by the distinctly rare art work created by Alfred Schiller of Advertising Agencies Service Co. This illustration (reproduced here greatly reduced by permission of *Printer's Ink*) is entitled *From a Penthouse Window*.

Comments *Printers' Ink:* "Proclaimed as 'the first new thing, or new idea, in printing since its invention by Gutenberg 500 years ago,' we now consider our visit to an exhibit of Machine-age Art, the curious type pictures of Alfred Schiller. The show we saw was at Tuck School, Dartmouth. We were amazed at the ingenuity of Mr. Schiller in assembling decorative type-cast units and other printing accessories into forms or patterns representing pictures. Whether this fascinating group of pictures can be called *art* is debatable, quoting a broadside issued by Mr. Schiller. But no one can deny that Mr. Schiller is a creative genius and brings a new challenge to typography. *From a Penthouse Window*, is cataloged as the 'most complex, most striking and most ambitious of his type pictures.' "

moved from the side. Only a single step and a quarter turn is required to place the stack of papers on the bottom wrapper.

The papers now rest on the bottom wrapper with the long dimension in the direction away from the mailer. In the case of bulk operation, as on our Latest Edition, the bundle is put on the feeder conveyor with a single straight push of 18 inches. On the Star Home Edition the large number of odd bundles requires that two counters be placed at each delivery to complete the bundles. With the stack placed with the long dimension of the bundle away from the counter, it is also in the most convenient position for counting. After the stack has been counted, the top wrapper, with or without supplements, is placed on the stack to complete the bundle. A straight 18 in. push places it on the feeder conveyor to be tied.

Variable Demands on Tying Machines

Our method of operation requires a wide variation in the demands placed on the tying machines. For example, when the paper is exceptionally large, we must limit the size of most Star Home bundles to 25 papers. This means that with the press running at 40,000 papers per hour we are operating the tying machines at full capacity. On the other hand, small supplements can be wrapped 200 in a bundle, and a single delivery would require only a small fraction of the tying machine capacity. It is, therefore, advisable to run more than one press delivery into a tying machine. For these reasons we required a conveying system which would provide a single feeder conveyor for each press delivery under certain conditions, and combine the output of several deliveries into one tying machine under other conditions.

Considered the Men

In considering a feeder conveyor of this type, we also felt that it should be so constructed to handle the bundle in the way most convenient to the men on the press deliveries. This meant that the bundle should travel the conveyor with the long dimension at right angles to the direction of travel, or in what some might regard as sideways. This had other advantages as well; for example, a bundle so placed on a conveyor requires little more than 11 in. of the conveyor length

Conference Dates *(with organization names and principal officers)*

American Photo-Engravers Association — Frank J. Schreiber, Commissioner, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference — William Penn Hotel, Pittsburgh, Pa., July 19, 20 and 21, 1948. J. L. Stackhouse, Chairman, Easton, (Pa.) *Express;* Walter E. Wines, Manager, ANPA Mechanical Dept. 370 Lexington Ave., New York 17, N. Y.

Great Lakes Newspaper Mechanical Conference—Gibson Hotel, Cincinnati, January 16, 17, 18, 1949. President C. M. Kirk, Stereotype Supt., Detroit *News*; Secretary Al P. Oberg, Composing Room Supt., Flint (Mich.) *Journal.*

Illinois Newspaper Mechanical Conference—President, Earl Anderson, Supt., Rockford Consolidated Newspapers, Rockford, Ill. Secretary, Howard Colton, *Daily Pantagraph,* Bloomington, Ill.

International Association of Printing House Craftsmen—Hotel Cleveland, Cleveland, August 8, 9, 10, 11, 1948. President, A. Gordon Ruiter, Supt., Forbes Lithograph Mfg. Co., P. O. Box 513, Boston, Mass. Secretary, Pearl E. Oldt, Chamber of Commerce Bldg., 12th Floor, Cincinnati, Ohio.

International Typographic Composition Association—Hotel Nicollet, Minneapolis, Minn., September 16, 17, 18, 1948. Frank M. Sherman, Executive-Secretary, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — Russell-Lamson Hotel, Waterloo, Ia., May 15, 16 and 17, 1948. President, Ed. C. Funk, composing room foreman, Waterloo, (Ia.) *Daily Courier;* Secretary-Treasurer, Paul Kamler, mechanical supt., Clinton (Ia.) *Herald.*

Lithographers National Association — Greenbrier Hotel, White Sulphur Springs., W. Va., July 21, 22, 23 and 24, 1948. W. Floyd Maxwell, Executive Director, 420 Lexington Ave., New York 17, N. Y.

Missouri Newspaper Mechanical Conference — President Beryl A. Troutman, *Courier-Post,* Hannibal, Mo., Secretary-Treasurer O. K. Hammitt, *Monitor-Index,* Moberly, Mo.

National Association of Litho Clubs — Washington, D. C., April 29-30, 1949. President, Albert Tucker, Sauls Lithograph Co., Washington, D. C.; Secretary William J. Stevens, 1776 Broadway, New York 19, N. Y.

National Association of Photo Lithographers — Netherland-Plaza Hotel, Cincinnati, Ohio, Sept. 15, 16, 17, 18, 1948. Walter Soderstrom, Executive Secretary, 1776 Broadway, New York 19, N. Y.

National Graphic Arts Education Association — Byron G. Culver, president; Fred J. Hartman, educational director, 719 Fifteenth St., N. W., Washington 5, D. C.

National Graphic Arts Exposition—International Amphitheatre, Chicago, September 24 to October 7, 1950. National Graphic Arts Exposition, Inc., A. E. Giegengack, President. Fred W. Hoch, Secretary, 461 Eighth Ave., New York 1, N. Y.

National Printing Equipment Association, Inc. — James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — Hotel Statler, Boston, Oct. 23 and 24, 1948. President, Wm. H. Porter, Mech. Supt., New Haven (Conn.) *Register.* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

New Jersey Press Association Mechanical Conference—1948 Conference tentatively to be held in Atlantic City, N. Y., in June. Hotel and date to be announced later. President Neal E. Dyer, Mechanical Supt., Camden (N. J.) *Courier-Post.*

Northwest Mechanical Conference — Hotel Radisson, Minneapolis, Minn., February 12, 13, 14, 1949. President, Chas. R. McGuire, Asst. Mechanical Supt., Minneapolis (Minn.) *Star* and *Tribune;* Secretary-Treasurer, Henry Magnus, Machinist, Minneapolis (Minn.) *Daily Times.*

Pacific Newspaper Mechanical Conference — Fairmont Hotel, San Francisco, May 1, 2 and 3, 1948. President J. W. Fitzsimmons, San Francisco (Calif.) *Call-Bulletin;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles, *Daily News.*

Pacific Society of Printing House Craftsmen — Mission Inn, Riverside, Calif., June 25 and 26, 1948. E. Deo Paul, President, 430 Court St., San Bernardino, Calif.; Blair Lord, Secretary-Treasurer, 3650 Fairmount Blvd., Riverside, Calif.

PNPA Mechanical Conference — William N. Hardy. Manager, PNPA, 209-213 Telegraph Bldg., Harrisburg, Penna. Chairman Mechanical Committee, E. O. Davies, Mechanical Supt., Harrisburg (Pa.) *Patriot* and *Evening News.*

Printing Industry of America—Edgewater Beach Hotel, Wed. to Sat. inclusive, Oct. 20-23; James R. Brackett, General Manager, 719 Fifteenth St., N.W., Washington, D. C. 1949 PIA Convention — Hotel Biltmore, Los Angeles, Nov. 14-17, 1949.

SNPA (Eastern Div.) Mechanical Conference—Walter C. Johnson, Manager SNPA, P. O. Box 1569, Chattanooga 1, Tenn. Chairman Executive Committee, I. J. Gardner, jr., Composing Room Supt., Chattanooga (Tenn.) *Times.*

SNPA (Western Division) Mechanical Conference—Secretary, C. W. Tabb, 723 Texas Bank Bldg., Dallas, Tex.

Southwestern Photo-Engravers Association — Roosevelt Hotel, New Orleans, La., June 27, 28, 29, 1948. Executive Secretary, Virginia Nichols, 3621 Country Club Circle, Fort Worth 4, Texas.

Southwestern Graphic Arts Conference—E. J. Deubner, Executive Secretary, 130 No. Volutsia Ave., Wichita 8, Kan.

as compared to 16½ in. In this way, a 10 ft. feeder conveyor produced as much space as a 15 ft. conveyor handling bundles in the conventional manner.

In our opinion, the feeder conveyor had to be so constructed that only the minimum forward thrust would be exerted on the bundle. Therefore, the conveyor could continue running while the bundle, riding upon it, remained stationary without being disarranged. This feature was important for a number of reasons. It made it unnecessary for the men feeding bundles onto it to carefully space them on the conveyor. This feature also made it possible to use the running conveyor as a temporary storage area during those periods of short duration when the number of bundles exceeded the tying machine capacity. The principle of the free roller Jampol conveyor seemed to be best suited for our purpose. Mr. Jampol was requested to redesign his conveyor to meet our requirements. We requested that the conveyor be made wider to handle bundles with the long dimension at right angles to the direction of travel, that the surface of the rollers be brought as close to the level of the side leaf tables as possible, and that a two-step speed control be provided. We desired two speeds—run and slow—because we felt that the reduced speed would double the storage capacity of the conveyor and would reduce the forward thrust whenever a short period of congestion resulted from a wire break on the tying machine. Much double handling is thus avoided.

Two feeder conveyor units were installed. Each unit consisted of two conveyors, each of which could be reversed to provide a single continuous conveyor in either direction to feed the tying machines placed at the both ends. Hinged, drop leaf tables were constructed along the length of the conveyors to serve as working tops. Two press deliveries from each of two presses, four deliveries in all, were arranged along the length and on both sides of each conveyor unit. In this way it is possible to run the product of each press delivery into separate tying machines, or run the product of two deliveries into either of two tying machines, or, when the presses are running double deliveries, to run the product of all four deliveries into one tying machine. It is also unnecessary to move wrappers and skids of supplements from one delivery to another when there is a web break on the press supplying papers to the run with top priority. By reversing the travel of the other conveyor section, the papers from the other press are taken past the inactive delivery and the bundles are prepared on the conveyor as they pass by.

Bundle Pusher Mechanism

For each tying machine I designed what the patent refers to as the Milwaukee *Journal* Feeding and Control Mechanism, but which is better known as the Pusher. This machine is, in effect, an automatic tying machine operator. It automatically ejects the previously tied bundle, with the bundle to be tied, and operates the tying machine. The bundles can have either single or two parallel ties, depending upon the position of a simple hand switch. It can handle any size bundle the tying machine is capable of tying. Any mixture of large and small bundles can be handled. No special care has to be taken in placing the loose stacks on the feeder conveyor. The machines are set to operate at 24 ties per minute.

Tied Bundles to Chute

The tied bundle is ejected into a chute which delivers it to a series of belt conveyors on the truck loading dock on the floor immediately below the Mail Room. The chutes were designed to deliver the bundles with the label side up.

Building columns divide the loading dock into four bays. One tying machine, one chute, and one belt feeds each of the four bays. The belts are arranged end to end to provide the effect of one continuous belt the full length of the platform. However, each belt is individually driven with its own two-step speed control and is reversible. This makes it possible so the product of any one chute can be taken to any spot on the platform.

Loading the Trucks

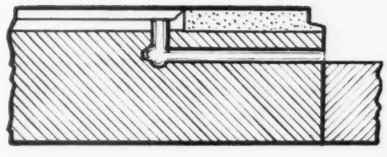
For the actual truck loading I designed special telescopic roller conveyors. These conveyors are attached to the belt conveyor frame and are provided with movable deflectors to take the bundles into the truck. The telescopic section is extended into the truck at the start of the load and is retracted as the load fills the truck. The front wheels are lowered or raised with a hand crank to meet the two different size trucks we have to load. In this way the bundle does not necessarily have to be touched from the time the top wrapper is placed on the loose stack in the Mail Room until it is loaded into the truck. The telescopic feature of the platform conveyors reduces, to a minimum, the movement required to load the bundle in the truck.

Our mailers and their foreman, George Feldt, had an active part in the development. Without their cooperation, much of this work would have been impossible. The men in the Circulation department spent many weeks revising their delivery system to help smooth out the operation. This type of cooperation contributes mightily to the success of the system.

Generous Technical Data Given in Offset Press Folder

DONE in four-color process and printed by offset, Harris-Seybold Co. has issued a six page French fold brochure. The folder contains illustrations and technical discussion and data related to the 42 in. by 58 in. and 50 in. by 72 in. two-color offset presses announced last month. The folder itself (65 lb. cover stock) shows a view of the Model 258 two-color press and a number of pictures descriptive of the new mechanical features. Contained within a 9½ in. by 7½ in. folder and printed upon 65 lb. coated cover stock, are specifications and floor plans including 10 sheets in which are illustrated and described mechanical details with description on the reverse side of each sheet. The floor plan and specifications are complete. The prints are done in duotone. The floor plan and specification folder is inserted in a die-cut pocket in the larger French fold folder. Folders may be obtained by writing to Harris-Seybold Co. direct or you may address your request to *Printing Equipment Engineer*.

Prevents Paper Wrinkling on Heavy Bleed Border Jobs



IN JOBS where a heavy bleed border is used (often a mortised cut) the paper may wrinkle under impression on the press for the simple reason that air inside the border is compressed and has no means of escape. This produces defective border printing and the paper will wrinkle around the edges of the mortised cut.

This was the problem encountered by George Castanzo of the Commercial Printery, Scranton, Pa. Castanzo, the cylinder pressman, solved the problem by drilling two ⅛ in. holes through the wood base of the cut. They were drilled horizontally from one side toward the center of the cut and close to the metal. If the cut is mortised all that is necessary is to bore until the drill comes through to the mortised part. If the cut is not mortised the holes are drilled until the end of the drill comes well past the border and then two holes are drilled through from the top of the cut to meet the horizontal holes at right angles. Of course, in the latter case, the holes drilled through from the top of the wood base are drilled where there is no printing surface.

In locking up a cut so drilled it is placed in the form so that the two holes are exposed and no furniture or quoins cover them to permit passage of air at the time of impression.

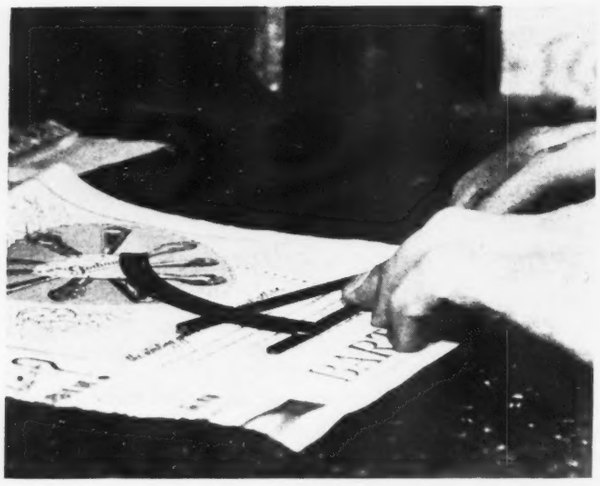


Fig. 1.—The angular fill-in furniture casting box used by Composing Room Foreman W. Beverly White of the Geneva (N.Y.) *Daily Times*, is a satisfying device for filling in those angular spaces in advertising and other kinds of composition. To illustrate the use of a protractor for finding the particular angle to be filled in with furniture, this picture is self-explanatory. The angle determined by the protractor is then transferred to the setting of the lever *1* shown in the casting box in Fig. 2.

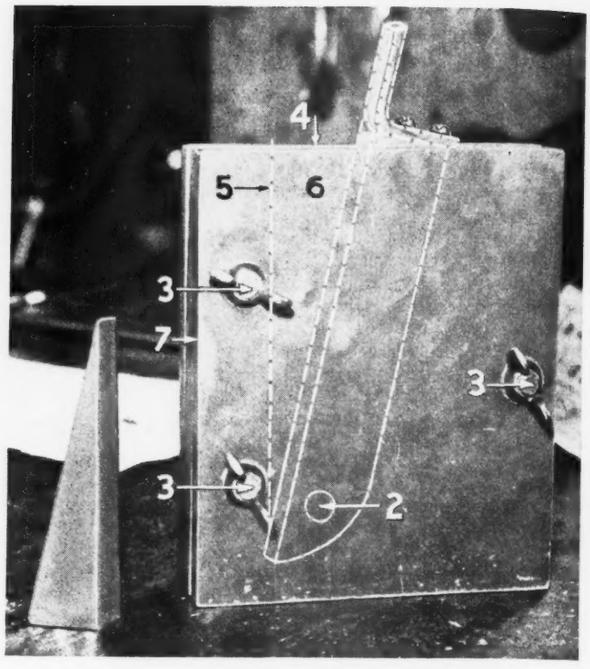


Fig. 2.—Along the top edge of the back plate at *4* is a scale graduated from 1 deg. to 35 deg. When the angle for a space to be filled in with metal furniture has been determined by the protractor shown in Fig. 1, the protractor reading is transferred to the casting box by swinging the lever *1* pivoted at *2* to coincide with the scale *4*. Wing nuts *3* are then tightened and molten linotype metal is poured from a hand ladle into the opening *6*. Right-hand side *5* of the left-hand separating piece and left-hand side of swingable lever *1* together with the back and front plates form the mold orifice *6*. Separating pieces *7* at either side of the box and between the box plates as well as swingable lever *1* are of such thickness that the angular furniture cast in the mold will be 0.759 in. high. Box is constructed from steel plate ½ in. thick, 6⅛ in. wide and 7¼ in. high. Separating pieces or liners as well as lever *1* are of such thickness that furniture cast in the mold will be 0.759 in. thick. Wing nuts *3* hold plates tight after lever *1* has been adjusted to proper angle. Wing nuts *3* are loosened to permit solidified cast to be shaken from the mold. A paper wad or asbestos may be used to stop off the opening at the bottom of the casting cell to prevent molten metal running from the mold.

Casting Box

for casting angular fill-in furniture

ADVERTISING composition as well as other kinds of composition often call for lines, logotypes or cuts to be positioned at an angle. In the plant of the Geneva (N.Y.) *Daily Times*, W. Beverly White, foreman of the composing room uses a casting box that makes it easy to cast angular furniture. The equipment consists of two independent parts. One is a protractor graduated from 1 deg. to 60 deg. The protractor is laid on the copy with its base parallel to one side of the chase into which the composed copy is to be locked. The arm of the protractor is then moved until it coincides with the angular line of the copy. A reading is then taken from the protractor scale, the scale being on the segment of the protractor. The protractor can be employed to take measurements for casting angular furniture to be used on either side and the top and bottom of any copy to be set in angular position. In taking measurements, place the base of the protractor either parallel with the bottom, one side or the top of the ad copy.

The casting box consists of two pieces of steel plate stock 6⅛ in. by 7¼ in. by ½ in. thick. A steel bar has been fastened between the two pieces of steel bar at either side to hold the body plates apart sufficiently so that the cast between the pieces will be base high (0.759 in.). Three bolts with wing nuts hold the two side plates together when tightened. The three winged bolts are loosened after the cast has solidified to permit the cast to be shaken from the mold.

A lever-like bar (*1* in Fig. 2) pivoted by pin *2* is swingable through a segment of a circle to obtain the proper angle for the fill-in furniture which is to be cast. Thus the inside edge of the left-hand side bar *5* and the left-side of lever *1* form the mold *6* in which the cast is made.

Along one edge of the top of this mold at *4* Fig. 2 there is a scale graduated from 1 deg. to 35 deg. To use this casting box, the reading from the protractor is taken and then the lever *1* within the box is adjusted to the reading of the protractor. The three winged bolts are then tightened and the box is ready for use.

To cast the piece of angular furniture, hot linotype metal is poured from a ladle into the opening *6* at the top of the box. The metal cools quickly. The wing nuts are then loosened, the casting box turned upside down and the angular furniture drops out. The cast is then trimmed to proper length on a saw-trimmer when it will be ready to be inserted in the form.

Impressive Promotion

The front cover of a desk calendar printed by The Gray Printing Co., Fostoria, O., for distribution to its customers, shows in miniature form the 11 new equipment items added by the firm in 1947 to produce better work and serve its customers more efficiently. The calendar is 8½ in. wide by 6½ in. high. Each month's calendar is printed separately on a leaf in varying color ink by offset. An easel support permits setting the calendar on the owner's desk. Leaves are plastic-bound. The calendar leaves are ruled off into squares for marking memos. The preceding and the coming month calendar each are contained in a square. The equipment items illustrated are: Big Chief ATF Offset Press, Little Giant Letterpress, Harris Offset Press, Kelly "C" Letterpress, Elrod Slug-Casting Machine, Vacuum Frame, Automatic Folder, Gang Stitcher, Offset Plate Maker, Precision Timer for Offset Negatives and a Labor-Saving Paper Stacker.

Long-Life Offset Plates in Magazine Production

At the March 16 meeting of the Association of Publication Production Managers, New York, a review of developments in the use of the offset process for the production of magazines was presented by H. C. Latimer, Educational Director of the Lithographers National Association. Of chief interest to this group headed by Kenneth McKean of *Look* magazine, were the recent developments in long-life offset plates suitable for magazine production on multi-color web offset presses.

EUROPEAN experience in magazine production by offset favors a plate which has an electrolytic deposit of chromium on a brass or copper plating covering a metal base plate—aluminum being used currently because of availability. A chemical grain, or no grain at all, is used in place of the usual mechanical grain, and the image is etched through the chromium onto the brass beneath. At least two of the new American long-life offset plates, the Electron-O-Plate and the IPI Tri-Metallic plate, similarly do not use the conventional mechanical grain. With these new types of plates, both American and European, a minimum of water film is required for the non-printing areas. Heat is used to hasten the drying of the ink with the high-speed web offset presses. Although a coated stock is not necessary for process color work with the offset process, machine coated papers widely used by large magazines could be produced for offset, it was stated.

Sheet-fed multi-color offset presses throughout the country have been producing a number of periodicals. As many as four colors are put on each side of the paper as it goes through the press once. The cutting and folding of signatures at the delivery end is a continuous operation. Both the Latin American and Overseas editions of *Time* magazine are produced on the East Coast this way, it was pointed out. Until recently when the American edition of *Newsweek* replaced its Pan-American edition, the latter was produced the same way by offset in Atlanta, Ga.

Foreign editions of American magazines, whether produced in this country or abroad, like the Paris edition of *Time* and the Tokyo edition of *Newsweek*, are usually shorter remakes of the domestic editions. In such cases the standard practice is to pull transparent proofs of the text pages and repro proofs of each color plate for the cover, and the lithographer makes his offset plates from the former and photographs the latter to "convert" to offset production. In one instance the transparent proofs are received at 8:30 in the morning, press production starts at 10 o'clock and the edition is at the air field for shipment by 3 p.m. the same day. Covers in color are done by offset the previous week. For foreign production the usual practice, it was stated, was to air mail similar proofs to destination for producing magazines by offset. A similar method, using negatives or positives in place of transparent proofs, was used by the Army during the war for map production in the field.

The use of the lithographic (offset) process for large consumer magazines is just starting, Mr. Latimer pointed out. The special web presses needed are only now being delivered, although ordered years ago. The development of long-life offset press plates was held up by the war and the results of much research work are only now becoming available. The specially designed Faber-Dutro *Time* press will soon go into production at Los Angeles; this press will turn out a 64-page signature of *Time* with two colors on each side of the paper. One of the new Dutro-Hendy web offset presses is now in production at the Pacific Press in Los Angeles. It is claimed that this make of press can give speeds up to 15,000 imp. per hr. with any color arrangement desired. After production tests in this country, the *Readers' Digest* recently shipped to South America a Webendorfer web offset press which will produce a 96-page signature with four colors on each side of the paper from a 48 in. width roll at speeds up to 15,000 r.p.h.

Offset specimens were shown to the production managers of magazines' promotional material and of their advertisers' merchandising aids which had been produced by "converting" letterpress magazine color plates and gravure color separations used for the magazine advertisements. This technique, it was pointed out, is being used more and more in integrating the complete advertising campaign with the publication advertising.

Printing Plates Research, Inc.

Action to increase the rate of its research expenditures at Battelle Institute and discussion and inspection of the research now in progress highlighted the eighth annual meeting of Printing Plates Research, Inc., held in Columbus, O., recently. Fourteen of the 19 member companies were represented at the meeting.

A research progress report by Dr. R. M. Schaffert, M. F. Browning, and Rexford W. Jones, of the Battelle staff, was presented during one of the sessions, and a lengthy discussion of plant production problems and platemaking developments featured another session.

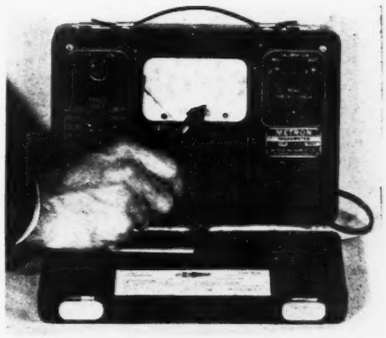
At a business meeting, it was voted to increase research expenditures. An Amended Code of Regulations was also adopted, providing for an associate membership in the corporation.

During a meeting of the Board o Trustees, Joseph Schwartz, Westcott and Thomson, Inc., Philadelphia, was re-elected president for a term of one year. Also re-elected were R. R. Myers, Capital City Printing Plate Co., Des Moines, Ia., first vice president; and Sam Ross McElreath, Sam Ross McElreath Co., Dallas, Tex., second vice president. Ray E. Kreber, Van Bolt-Kreber Electrotype Co., Columbus, was elected secretary-treasurer, and J. Homer Winkler, Battelle Institute, was appointed manager.

Printing Plates Research, Inc., is a nonprofit organization of electrotype manufacturing firms of the United States and Canada. Its research at Battelle Institute has resulted in several important developments in printing plate manufacture, the best known being the plastic electrotype molding process, known commercially as the PPR molding process.

Precision Tachometer
Accuracy to ¼%

A NEW tool to measure speeds of rotation with extreme accuracy is now available for laboratory, test stand and general applications. The new Metron Precision Tachometer, it is announced by manufacturer, is accurate to ¼% of the speed being measured and



is of the continuous indicating type, covering wide speed ranges.

Two types are available, identical except for speed ranges: Type 48H, for speeds of 900 to 10,000 r. p. m.; and Type 48J, for speeds of 90 to 1000 r. p. m. Each has 10 overlapping ranges, selected by a rotary switch. No damage is incurred by accidental selection of the wrong range.

Metron Precision Tachometers employ an electrical bridge circuit principle, and are self-calibrating. When calibrating, the sensitive speed measuring circuit is matched against internal precision resistors, thus insuring readings against changing ambient conditions.

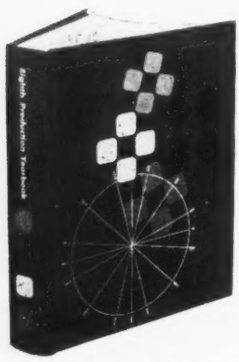
These high-accuracy tachometers can be used with Metron Type 46 high and low-speed adapters to shift measuring ranges up or down from normal ranges. The tachometer head, it is claimed, employs one rotating part, permanently lubricated for long, trouble-free life.

BOOKS

RECEIVED

Graphic Arts VIIIth Production Year Book

IT IS extremely difficult to evaluate in a short review all of the features of such a volume as the *VIIIth Graphic Arts Production Year Book*. At the outset, we want to emphasize that this book is a valuable one for *any* production or mechanical executive. Since it is demanded that these executives have an overall comprehensive knowledge of all the printing and fabricating processes used in the Graphic Arts industries, it follows that the best way in which they can perpetuate that reputation is by having at hand a source of reliable information. No one can possibly keep in his mind the mass of detail to be found in this book with respect to all phases of the Graphic Arts processes. The executive who doesn't have the reply to any of the innumerable technical questions thrown at him from time to time is headed toward obscurity—at least he cannot expand his usefulness to his employers. Another thought is that when art copy comes into the plant and it isn't executed properly, he can tell what is wrong if he has the *VIIIth Production Year Book* at hand. By making these few simple statements *Printing Equipment Engineer* feels it has indicated the importance of this book to production and mechanical executives.



Miniature reproduction of encyclopedic VIIIth Graphic Arts Production YearBook—consistsof700 pages with 900 illustrations — many beautiful color inserts by all known processes. Dominant theme of book is color. Should be in library of every production and/or mechanical executive.

The book is divided into eight principal sections: 1 Art and Photography, 2 Photo-engraving, 3 Electrotypes and Duplicate Plates, 4 Paper, 5 Printing Processes, 6 Binding and mailing, 7 Typography, 8 Buyers' Guide and Indexes.

Sponsors of the *VIIIth Production Year Book* state that a new age of color in every form of printing is heralded. These accomplishments in color have been made possible not only by new processes and techniques but by short-cuts in production to bring the advantages of color printing within the range of the average advertising or publishing budget. The color theme emphasized by the color continues through the volume with the end leaves of red process color and the various divisional index pages also carrying out the same theme in red, blue and yellow.

The section on photo-engraving is exhaustively treated. The process itself is explained from an elementary standpoint by the use of diagrams and captions. One of the outstanding chapters is the demonstration of almost 100 effects produced from a single illustrative subject. How each one was done is explained in a caption immediately under the illustration.

Electrotypes, stereotypes, plastic and rubber plates are discussed. The making of electrotypes and plastic plates are explained in elementary manner.

All of the printing processes—letterpress, offset, lithographic conversions, gravure, collotype, aniline, silk screen, duplicating methods, photostats, steel and copperplate—are explained with diagrammatic illustrations.

Art copy preparation, while perhaps not directly of interest to the production and mechanical executive, certainly should be understood by him. Treated in this section are Munsell color system, color techniques, fluorescent water colors, photographic materials, one-shot color camera, cropping photos, copy for newspaper reproduction, art techniques, shading media, layout fundamentals, etc.

Typical of the gadgets to aid the production worker and art director with which the book abounds is the Type Visualizer, with which one can select any one of a possible 72,124 combinations of type faces.

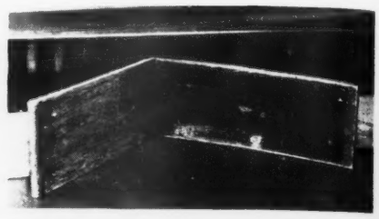
Other features include finger-tip estimating tables, permitting the fitting of type, calculating costs of engravings and electrotypes, and judging sizes of original or reduced copy, without using a pencil. Right and wrong kinds of copy for newspaper reproduction are illustrated with pictures for comparison with the copy being used.

More than 10,000 subjects or items are taken up in the YearBook. More than 300 Graphic Arts personalities assisted in the preparation of the material.

VIIIth Production Year Book—Edited by Leo. H. Joachim and Managing Editor Edward M. Gottschall. Size, 8½ in. by 11¼ in., 700 pages with 900 illustrations with many beautiful color inserts by all processes. Bound in gray crash cloth with three-color, black and white cover design. Price $15 per copy. Orders may be sent to *Printing Equipment Engineer*. Please send remittance with order.

Corner-Cutting Problem In One-Time Carbon Form

ON ONE-TIME carbon form jobs it is generally required that the corner of the printed form be cut off at an angle to facilitate the picking up of the form and the taking out of the sheet of carbon paper. Golos Bros., Elmira, N. Y., do considerable of this work and have found a way of cutting the printed form at an angle in a simple manner.



A piece of board a trifle over 1 in. in thickness and 5 in. wide was cut in length so that it would fit into the cutter bed. Into this board a 90 deg. angle was cut. Two shorter pieces of board were then fastened together with screws to form a 90 deg. angle and this was then fastened in the recess of the first board mentioned.

To cut the printed forms, then, all that was necessary was to put the wooden angle piece in the paper cutter, with the board into which the 90 deg. angle was cut, up against the rear guide of the cutter and with the open portion of the 90 deg. angle facing the front of the cutter. It was then an easy matter to put the printed forms in this gadget, run the gauge back until the corner of the form extended beyond the cutting line, run down the clamp and cut the printed form. Any sort of angle could be obtained in this same way by varying the angle in the board.

New Methods for Printing Newspapers

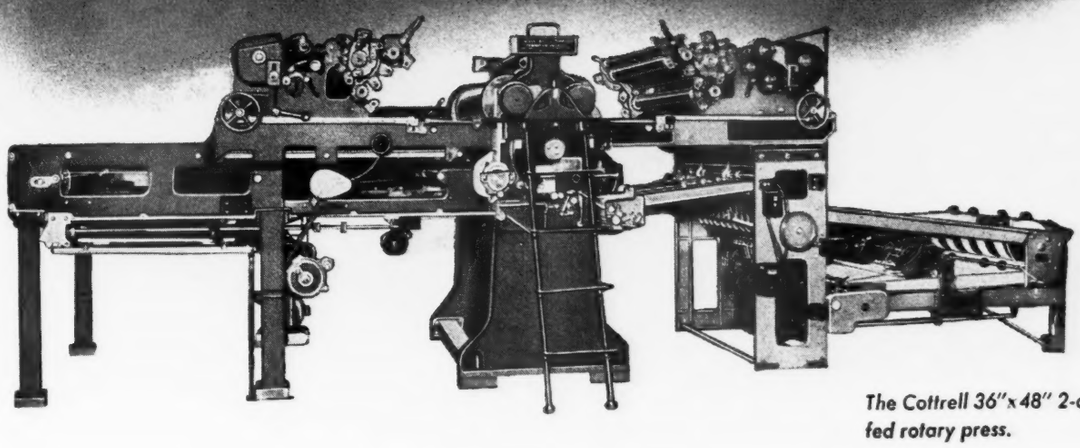
NEW processes and methods of printing newspapers will be the principal theme of the convention of the American Newspaper Publishers Association which meets in New York City, April 20, 21 and 22, at the Waldorf-Astoria Hotel.

C. M. Flint, ANPA Research Director, in an illustrated talk will tell publishers about new equipment and new techniques of printing newspapers as applied by newspapers in various cities.

Another feature of the meeting will be a complete display of all equipment used in printing newspapers by the photo-engraving process. Included in the display will be an exhibit of the step by step processes used by the newspapers of Chicago in preparing material for the presses, prepared under the auspices of the Chicago Newspaper Publishers Association.

Another part of the program will consist of a "panel of experts" made up of representatives of newspapers using the photo-engraving process, who will answer questions from the floor of the convention.

Predictable Results



The Cottrell 36"x48" 2-color sheet fed rotary press.

. . . in color printing at speeds

up to 5500 sheets per hour.

Cottrell

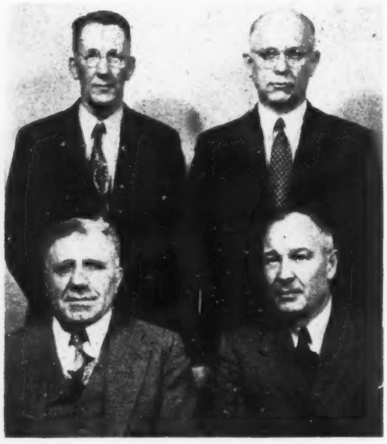
C. B. COTTRELL & SONS CO.

Westerly, Rhode Island

New York: 25 E. 26th St. • Clayburn Division: 3713 N. Humboldt Ave., Milwaukee, Wis.
Chicago: Daily News Bldg., 400 W. Madison St. • Smyth-Horne, Ltd., 13 Bedford Row, London W.C. 1, Eng.

EXECUTIVE ¶s

New Officers for Northwest Newspaper Mechanical Conference—Left to right at top: H. E. Magnus, Secretary-Treasurer Minneapolis *Times;* Vernon Eck, Instructor, Dunwoody Industrial Institute, Minneapolis, Second Vice President. Left to right, front row: Joseph Cory, Machinist, St. Paul *Dispatch-Pioneer Press,* First Vice President; Charles McGuire, Mechanical Supt., Minneapolis (Minn.) *Star* and *Tribune,* President.



E. G. Schreibeis has succeeded William Recht as general manager of Rutherford Machinery Div. of Sun Chemical Corp. Announcement was made by Mr. Recht, who is vice president of Sun, and general manager of the Corporation's Overseas Div. For the past two years,

E. G. Schreibeis is now general manager of Rutherford Machinery Div of Sun Chemical Corp.

Mr. Schreibeis has been assistant general manager for Rutherford. He has served as sales manager since 1933, at which time the machinery part of the business was separated from the Fuchs & Lang Div. He had previously served in the same capacity with Fuchs & Lang, and at an earlier time he managed the Philadelphia office.

George R. Keller, Supplier to the Graphic Arts, Washington, D. C., announces that Clarke J. Fitzpatrick, jr., is associated with him and will cover Maryland, including Baltimore and part of Virginia. Mr. Fitzpatrick, formerly of the AAF, is married, has one child, and is a resident of Catonsville, Md. Marion A. Reading has also joined the Keller organization as office manager. Mr. Reading has been a resident of Washington since 1934, and was formerly employed as credit manager of the R. P. Andrews Paper Co.

Business Manager J. H. Butler has announced the appointment of Gordon F. Elrod as production manager of the Houston (Tex.) *Chronicle.* Mr. Elrod is well known throughout the newspaper printing industry. Previous to assuming his duties with the *Chronicle,* Mr. Elrod was eastern sales manager for the Duplex

Gordon F. Elrod lately has been madeProduction Manager of Houston (Tex.) *Chronicle.*

Printing Press Co. with headquarters in New York. During the war years he was employed by the War Production Board as Division Director of the Smaller War Plants Corporation. His father, Floyd Elrod, is stereotype superintendent of the New Orleans (La.) *Times-Picayune.*

Orson H. Udall, manager of American Type Founders Sales Corp. office in Los Angeles has announced appointment of Michael M. Vukelich as salesman in southern California territory. Mr. Vukelich was formerly a printer and publisher

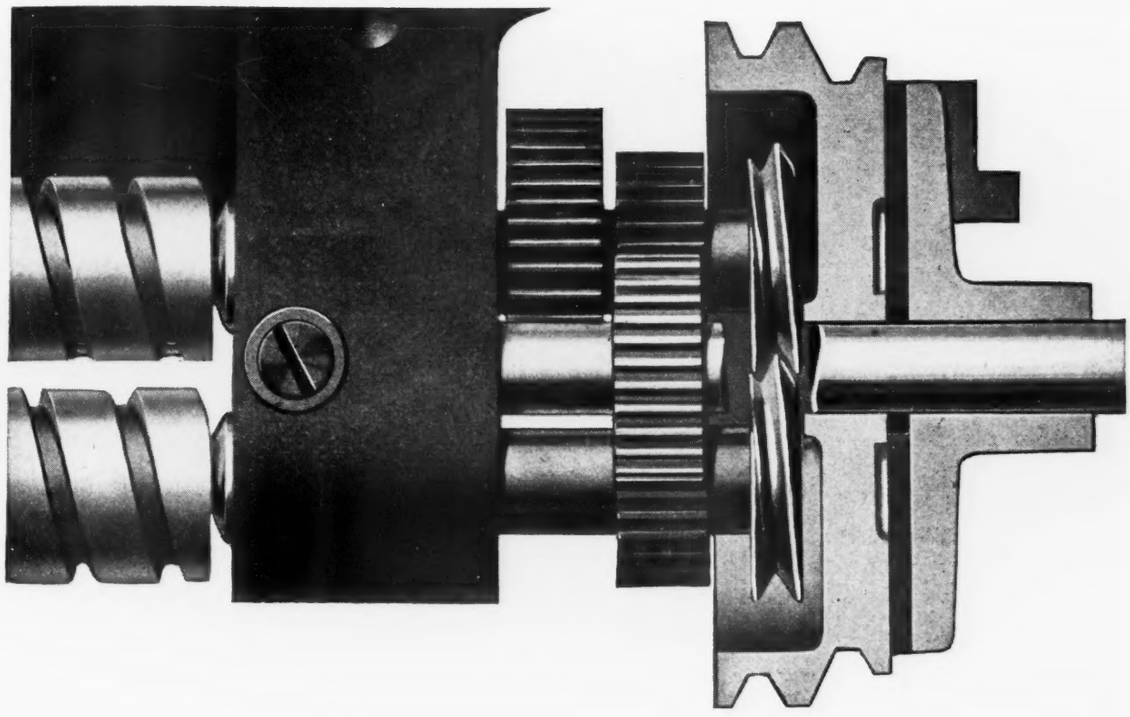
Michael M. Vukelich represents ATFS Corp. in Southern California territory.

in Aitkin, Minn. He purchased and operated the Wolf Point (Mont.) *Herald-News,* and later his holdings were enlarged by the purchase of the *Poplar Standard,* official newspaper of Roosevelt County, Mont. Mr. Vukelich joins the ATF staff to cover the sections of San Diego, Riverside, San Bernardino, Compton, Whittier and Huntington Park. The Los Angeles office of the company is at 470 East Third Street.

Left to right are Charles P. Taft; P. E. Oldt, Executive Secretary, and A. Gordon Ruiter, President, International Association of Printing House Craftsmen, and Douglas Fuller.

International PHC Offices Now Located in Cincinnati — First midyear meeting of the board of the International Association of Printing House Craftsmen in permanent headquarters, Cincinnati, was held February 21-22. Charles P. Taft, Majority Leader of the Cincinnati City Council, welcomed the locating of the International offices in Cincinnati on behalf of the city at the Saturday night meeting at which the Cincinnati Club of Printing House Craftsmen was host to the International officers, including A. Gordon Ruiter, President, and other members of the official family. Douglas Fuller, Executive Vice President of the Cincinnati Chamber of Commerce, greeted the Association on behalf of his organization and Mr. Ruiter congratulated the Association on having established permanent offices. P. E. Oldt is the first Executive Secretary and carried on the work from his home until the International officers decided to move the offices from Grand Rapids, Mich., to a more central location. The invitation of the Cincinnati Club of Printing House Craftsmen to establish the headquarters in Cincinnati was accepted last July. In September, Mr. Oldt moved to Cincinnati with his family. The new headquarters location is at 18 East Fourth St., Cincinnati 2, Ohio.

Spiral Automatic stops the show . . . to keep production moving



DISTRIBUTION OF MATRICES—continuous distribution—is an exacting operation that requires precision control. To keep distribution moving smoothly, Linotype features an ingenious protective device that temporarily locks the distributor screws, the instant any interference takes place.

The spiral automatic, as this device is called, stops the show short. But only for a moment. Once the interference has been cleared, it takes but a second to start the distributor on its way again.

The action of the spiral automatic is simple as it is instantaneous. Any possibility of damage to matrices or channel entrance partitions is eliminated. Production time is saved. Only Linotype has the spiral automatic—standard equipment on all models.

MERGENTHALER LINOTYPE COMPANY
29 Ryerson Street, Brooklyn 5, New York

LINOTYPE

Set in Linotype Scotch No. 2 and Spartan Heavy

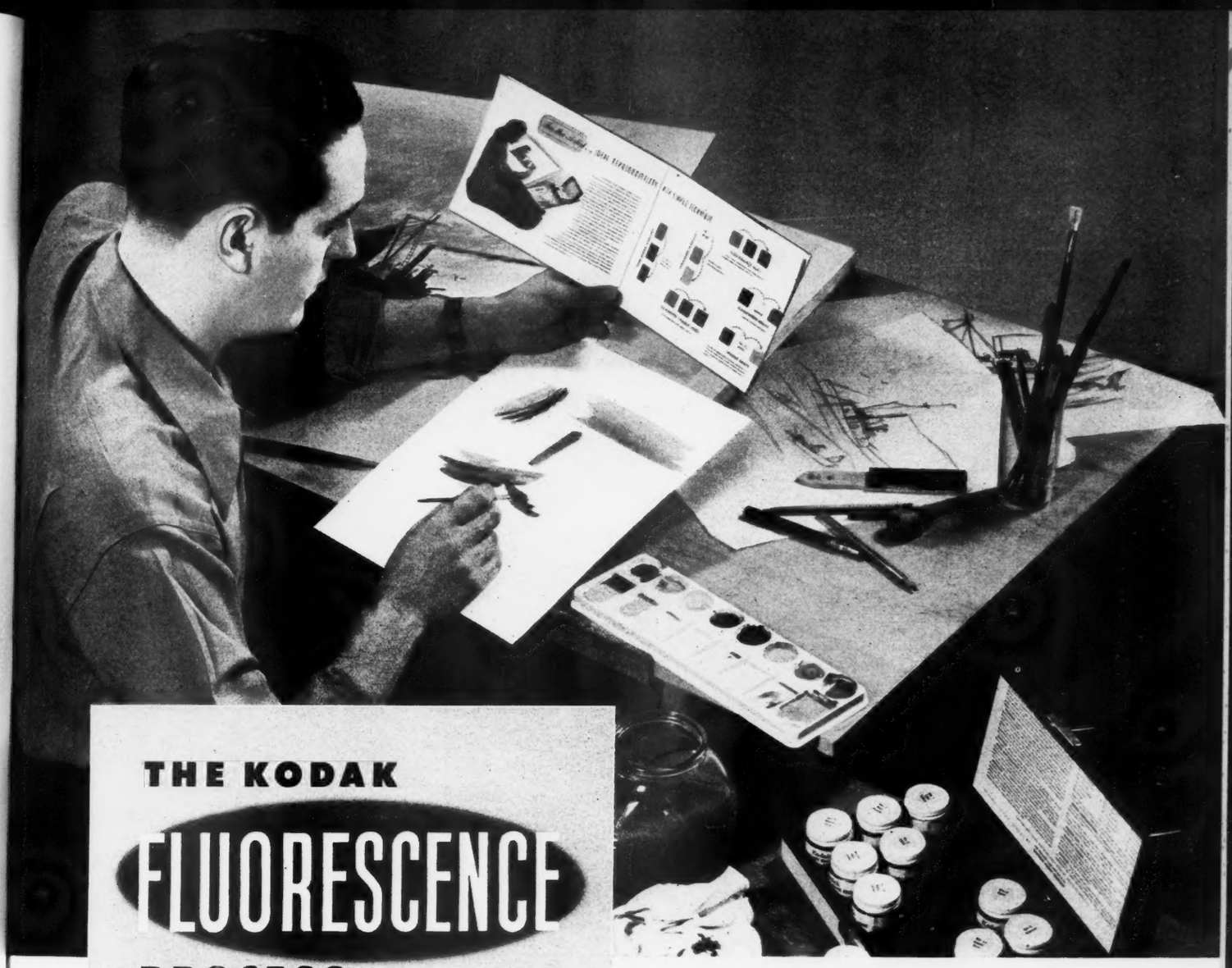
Goss's new general works manager is Adrian O. Holmberg. Will coordinate manufacturing facilities of Goss and Duplex plants.

Appointment of Adrian O. Holmberg as general works manager of The Goss Printing Press Co., Chicago, was announced recently by Robert C. Corlett, president. In his capacity as general works manager he will take charge of the company's Chicago plant as well as coordinate the manufacturing facilities of the recently acquired plant in Battle Creek, Mich., which was formerly The Duplex Printing Press Co. Holmberg is a native of South Bend, Ind. and attended Purdue University. In the summer months while attending college and after graduation, he was employed by the Studebaker Corp. at South Bend. He later was connected with a firm manufacturing machine tools and filled various supervisory and executive capacities in that industry. Mr. Holmberg is married, has two children, and is moving from Milwaukee to take up residence in the Chicago area.

President Edw. G. Williams announces election of R. F. Nelson as director and vice president of ATF.

Robert F. Nelson has been elected a director and vice president in charge of all engineering and manufacturing operations for American Type Founders, Inc., it has been announced by Edward G. Williams, president. Company headquarters are in Elizabeth, N. J., and plants are at Elizabeth and Mount Vernon, N. Y. Before joining American Type Founders, Mr. Nelson was vice president and assistant to the president, and a director, of R. G. LeTourneau, Inc.

General Committee Plans for the XXIXth Annual Convention, International Association of Printing House Craftsmen, Cleveland, O., August 8, 9, 10 and 11, 1948 at Hotel Cleveland. The technical-educational program will be up-to-date and helpful to all printing executives. Several displays related to the Club Bulletin Contest, Printing Week Observance and Printing by Various Processes are being planned. Entertainment for visiting Craftsmen executives and their wives and families will be provided. At the time this picture was taken all of the general committee personnel were not present, but a representative cross-section is shown below. The various committee chairmen are as follows:
(Front row, left to right): Hotels Committee Chairman Wayne Gaspar; Mr. Gaspar is convention co-chairman and is also president of the Cleveland Club of Printing House Craftsmen. He is superintendent of R. E. May, Inc., Cleveland. Finance and Budget Committee Chairman Chester L. Klien; Mr. Klien is convention co-chairman and is immediate past president of the Cleveland Club and is production manager of the printing department, Sherwin-Williams Co., Cleveland. Miss Ann Marie Sammon, General Committee Secretary. MacD. Sinclair, General Convention Chairman. Registration and Ticket Sales Chairman Robert Pettet; Mr. Pettet is Cleveland Club secretary and is superintendent of the Caxton Company, Cleveland. Transportation and Plant Visitation Chairman Joseph A. Chinnici; Mr. Chinnici represents the Lezius-Hiles Printing Co. in the Cleveland metropolitan area.
(Back row, left to right): Souvenirs and Badges Chairman Paul Ullmann; Mr. Ullmann is associated with Steffan Print Shop, Cleveland. Convention Committee Treasurer Earl M. Boner; Mr. Boner is associated with Chandler & Price Co., Cleveland. Printing Committee Chairman Edward T. Samuel; Mr. Samuel is Treasurer of the Intl. Association, and is president of Samuel & Walker, printers. Booster Committee Chairman J. I. Moore; Mr. Moore represents Ludlow Typograph Co., in the Cleveland area. Golf Committee Chairman C. C. Clippinger; Mr. Clippinger represents the Union Paper & Twine Co., Cleveland area. Exhibits Committee Chairman William Wesson; Mr. Wesson is printing production manager for Fisher Bros. Co., Cleveland. Joseph Pilarski was "standin" for Host and Greeters Committee Chairman Wm. J. Schneider, pressroom foreman of William Feather Printing Co.; Pilarski is a Cleveland area representative for Sam'l Bingham's Son Mfg. Co., Cleveland. Entertainment Committee Chairman Sidney Langford; Mr. Langford is Cleveland manager for Sigmund Ullman-General Printing Ink Div. of Sun Chemical Corp.
Not present at the time this picture was taken were: Out-of-Town Membership Committee Chairman Walter Amshey of the Danner Press, Akron, O.; Press Relations Committee Chairman D. M. Oldfather, Vice President, Schaefer Printing Co., Cleveland; Program Committee Chairman Thomas P. Mahoney, who is production manager for American Greeting Publishers, Cleveland; Roving Reporter D. W. (Bill) Stock of Lawrence Electros; Publicity Committee Chairman R. J. Niederhauser who is advertising manager for Harris-Seybold Co., Cleveland; Signs and Decorations Chairman George J. Lenzer who is associated with Morgan Lithograph Co., Cleveland.
Entertainment during convention days for the ladies will be provided by a Mrs. M. L. (Ruby) Abrams and her Ladies' Committee. The Ladies Committee will plan its own program with the exception of the plans which have been incorporated for them in the regular convention proceedings.



THE KODAK FLUORESCENCE PROCESS...

KODAK Fluorescent Water Colors are made specifically for commercial artists to use when making water-color sketches or wash drawings for photomechanical reproduction.

Any commercial artist who uses water colors can use Kodak Fluorescent Water Colors. The simple technique of their use can be mastered quickly and easily.

Artwork prepared with these colors is ideally suited for reproduction. Each color's fluorescence is in direct proportion to the amount of color correction it requires to be faithfully reproduced with four-color process inks. Faithful reproduction is further aided by the fact that only those colors which can be reproduced by standard four-color process inks are included in the palette.

Complete sets of twenty Kodak Fluorescent Water Colors, or individual replacement colors, are available from your Kodak Graphic Arts dealer. To make certain that you and your artists know the many advantages which the Kodak Fluorescence Process offers, write today for your free copy of the booklet, "The Kodak Fluorescence Process," illustrated below.

GRAPHIC ARTS DIVISION

EASTMAN KODAK COMPANY

ROCHESTER 4, N. Y.

"KODAK" IS A TRADE-MARK

Kodak

To investigate market conditions and consult with field representatives, Walter J. Selton, Export Manager for Federated Metals Div., American Smelting and Refining Co., left recently for an extensive trip through South and Central America which will bring him into 18 major commercial centers and 14 Latin-American countries. Selton's itinerary will include, among the more prominent countries, Cuba, Haiti, Puerto Rico, Dutch West Indies, Venezuela, Colombia and Panama.

The Public Printer Resigns

A. E. GIEGENGACK, Public Printer of the United States, announced to a group of his officials on March 9 that President Truman accepted his resignation effective March 15. Mr. Giegengack has become associated in a consulting capacity with the Equity Group of Investment Companies, at Room 2640, Graybar Building, New York, N. Y. He will advise on processes, developments and investments in the Graphic Arts field. The Equity Group has investments in numerous industrial companies which are present or prospective manufacturers of Graphic Arts

equipment. Mr. Giegengack is now engaged in a survey of the printing industry to determine the industry's new machinery requirements. Results of this survey will form the basis for a research-development program.

Since 1934, when Mr. Giegengack became Public Printer, the number of employees in the GPO has increased from about 5000 to approximately 7000. In the same period, the value of its production has jumped from $18 million to an average annual business of $63 million. One of the first steps that made the increase possible was the replacement of the old ramshackle buildings with the present modern plant that covers 31½ acres of floor space. Through the Public Printer's foresight, it was ready for occupancy just two years before the outbreak of the war.

Among improvements leading to better printing service are the following:

Establishment of a cost system.

Modernization and streamlining of physical equipment and replacement of obsolete machinery.

Creation of a Division of Personnel.

Creation of a Division of Typography and Design.

Expansion of a small planning section to a four-division planning organization which works out complete specifications and schedules for every job.

Appointment of a Consultant on Methods and Procedures who is charged with studying all Office operations.

The New Public Printer

JOHN J. DEVINY, the newly appointed Public Printer, was born in Washington, D. C. His education was obtained at the Gonzaga College

High School in Washington, D. C.; at the Josephinum College in Columbus, Ohio; and the Washington College of Law in Washington, D. C., from which he received his law degree as the president of his graduating class.

Mr. Deviny is a practical printer, having entered the Bureau of Engraving and Printing as an apprentice plate printer and worked as a journeyman for a number of years. He was appointed Production Manager for the entire plant during World War I. Later he was advanced to Assistant Director and resigned that position in 1925 to become Director of Research and Publicity for the Miller Saw Trimmer Co., Pittsburgh, Pa. Subsequently, he was Executive Vice President of the United Typothetae of America in Chicago and in Washington and during NRA was National Code Director for the Relief Printing Industry.

At one time he held a judicial position as a member of the Appeals Council, the highest adjudicative body of the Social Security Board.

He is one of the co-founders of the Craftsmen's movement in Philadelphia in February, 1919 and was elected the first treasurer at that time. He later served two separate terms as president of the International Association of Printing House Craftsmen.

Mr. Deviny is a member of the Bar of the Supreme Court and the Court of Appeals, Washington, D. C. He has been Deputy Public Printer of the United States since March, 1941.

Announcement was made in March of the retirement of John A. (Jack) Burke, for many years production manager of

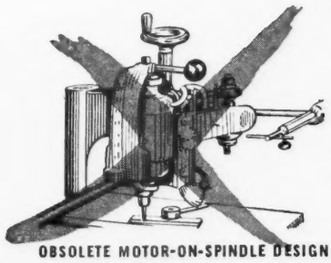
J. A. (Jack) Burke

Gannett Newspapers with headquarters in Rochester, N. Y. While Burke has retired, he will act in a technical advisory capacity. He has been succeeded as production manager by Bernard (Bernie) Garrity. Garrity has been personnel

B. F. (Bernie) Garrity

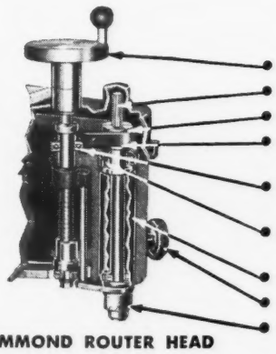
manager and assistant to Burke for the past two years. Formerly, he was mechanical superintendent of the Hartford (Conn.) *Times*. Burke was a member of the ANPA Mechanical Committee but was succeeded last year through the appointment of Mr. Garrity who is a member of the committee.

it's all in the HEAD



OBSOLETE MOTOR-ON-SPINDLE DESIGN

Hammond has discontinued the use of the universal type of motor because routing operations are too heavy for it. Costly motor burn-outs and shut-downs are now eliminated with a regular type constant speed motor, belted drive, and ball bearing spindle.



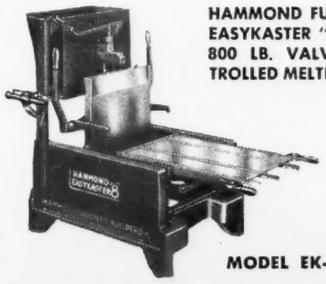
- Handwheel for raising and lowering spindle.
- Precision spline shaft spindle.
- Dynamically balanced pulleys.
- Belted drive from a ½ HP constant speed regular type motor.
- Ball Bearings for easy vertical spindle adjustment.
- Spindle ball bearings for high-speed trouble-free service.
- Quill.
- Spindle lock.
- Dynamically balanced 3-jaw chuck.

HAMMOND ROUTER HEAD

MODEL R-4

Hammond Radial Router

It's all in the head — and the Hammond Radial Router head HAS WHAT IT TAKES to give top routing performance and years of trouble-free service. The ball bearing spindle runs at 12,000 RPM. It incorporates the best type of design for this purpose — grease sealed bearings, quill and spline shaft. The pulleys and other parts are dynamically balanced for smooth, vibration-free operation. The Hammond Radial Router is fully powered, ruggedly built, and has the "feel" and sensitivity the operator needs. The machine has a capacity of up to full-page plates. Without obligation on your part, write us for complete information.



HAMMOND FULL PAGE EASYKASTER "8" WITH 800 LB. VALVE CONTROLLED MELTING POT.

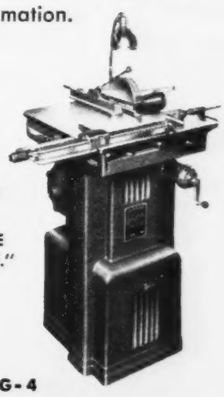
MODEL EK-8P

MODEL T23-30

FULL-PAGE ELECTRIC SCORCHER WITH THERMOSTAT CONTROL.

Glider TRIMOSAW

"THE SAW WITH THE BALL BEARING TABLE."



MODEL G-4

Hammond Machinery Builders INC.

1604 DOUGLAS AVENUE • KALAMAZOO 54, MICHIGAN

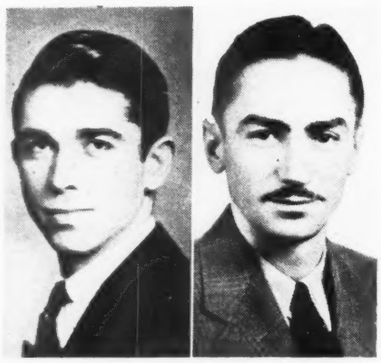
According to Rutherford Machinery Div. of Sun Chemical Corp. L. E. Ditsler has rejoined that Division, as western sales manager in charge of the Chicago Office, at 24 North Racine Ave.

William A. Duboc, Sales Director of the Printers Equipment Div., Hamilton Mfg. Co., passed away at his home at Two Rivers, Wis. on Sunday, March 14. Funeral services were conducted both at Two Rivers and Columbus, O., with interment at Columbus, his former home. He was born at Marion, Iowa. One of his first business connections was as a salesman for the Cincinnati branch of American Type Founders. He early developed a special interest in composing room operation and was later transferred to ATF's Chicago office. After several years he was transferred to the home office of ATF at Elizabeth, N. J., where he was placed in general charge of type sales. In 1937 he joined Hamilton Mfg. Co., making his headquarters at the factory at Two Rivers. He is survived by his wife, Louise Peters Duboc and by a daughter, Suzanne P. Duboc who is in her senior year at Smith College.

H. F. (Hi) Farnsworth, manager of American Type Founders Sales Corp.'s San Francisco office has returned to active selling for the company in the field, it has been announced by Robert G. Marquardt, vice president in charge of domestic sales. Replacing Mr. Farnsworth as San Francisco manager is Willis C. Johnston, manager of ATF's Seattle and Portland offices for the past four years. He was assistant manager and salesman in the San Francisco bay region before going to Seattle and Portland. The San Francisco office is at 1261 Howard St. Also announced in the shift of ATF west coast managers is the appointment of Richard W. Hardy as manager of the Seattle and Portland offices. Dick Hardy has represented the company in Portland since 1940. The Seattle office is at 71 Columbia St., and the Portland office at 416 SW Oak St. Roy J. Kirby, manager of the ATF Sales Corporation's office in Chicago, has announced the appointment of William C. Lantzy as Denver representative. Mr. Lantzy formerly represented the company at Denver but he resigned in 1942 to enter the U. S. merchant marine. Following his war service he returned to ATF in the Chicago Office, where he acted as assistant to Mr. Kirby.

H. F. Farnsworth, of ATF's San Francisco office, has returned to active selling in the field.

W. C. Johnson has been made manager of ATF's San Francisco office. Formerly managed Portland-Seattle offices.



R. W. Hardy is now manager of ATF's Seattle-Portland offices. Has been with the company since 1940.

W. C. Lantzy has been named Denver representative for AFT. Since war he has been with Chicago ATF Office.

George T. Bailey, Vice President and General Manager, Photogravure and Color Co., New York, announced over the weekend the election of Frederick H. Rudolph jr. as Vice President in Charge of Sales. Mr. Rudolph, a native of Roseland, N. J., served during the War as a captain in the United States Army Air Forces in the Air Transport Command, European Theater of Operations. He comes from the Riverside Press, Cambridge, Mass., where he was manager of the subcontracting department.

Robert Perchet, Chief Engineer of *Societe D'Electro Chimie, D'Electro Metallurgie et des Acieries Electriques d'Ugine* spent a month recently at the plant of the C. M. Kemp Mfg. Co. in Baltimore, studying the methods and procedures of dehydration of air, gases and liquids. Upon his return to France, Mr. Perchet, as manager of Durferrit-Sofumi S.A., will manufacture desiccant drying equipment under license from the Kemp Company.

A. B. Woodruff, supervisor of design engineering, and Don Grant, assistant to the director of chemical research, of the Harris-Seybold Co., were the principal speakers at the March meeting of the Chicago Litho Club. Woodruff discussed offset press developments and Grant addressed the group on departmental coordination in the litho shop. Woodruff recently addressed the printing department of Carnegie Tech, while Grant recently completed a 10 day lecture series at the Rochester Institute of Technology. . . . A. S. Holford, chemical sales manager for Harris-Seybold, recently completed a two week tour with representatives of California Ink Co., on the Pacific Coast.

Census Covers 1947 Activities

PRINTING establishments in all parts of the country are receiving or have already received, from the Bureau of the Census in Washington, D. C., a report form to be filed in the Census of Manufactures covering their operations during 1947. This inquiry into the affairs of printing establishments by the Census Bureau is occasioned by the resumption of the biennial industrial survey last made in 1940 to cover 1939 activities. The law requiring this census at two-year intervals was suspended during World War II and consequently reports for 1941, 1943 and 1945, which normally would have been required under the Federal statutes, were not made.

The statistical information on the printing industry and the industries engaged in activities allied to the printing trade will be published by the Census Bureau after the completion of the current survey and will close an eight-year gap in data which has been compiled at varying intervals since the first Census of Manufactures in 1810.

The current census is the twenty-fourth national canvass of all manufacturing industries in the series inaugurated 138 years ago. First taken at 10-year intervals coincident with the Census of Population, except in 1830 when no industrial canvass was made, the Census of Manufactures came at five-year intervals after 1900 and at two-year intervals from 1920 until the suspension of the series during the recent war.

Two forms, MC73A-1 and MC73A-2, are being used in the Census of Printing, Publishing and Allied Activities. While both of these forms are designed to collect statistics from establishments engaged in printing and/or publishing and such allied activities as bookbinding, blank book manufacturing, electrotyping, stereotyping, plate making, etc., only one form is being mailed to each establishment in these industries.

Form MC73A-1 is being used to canvass all establishments which employed a maximum of nine persons during 1947, excepting establishments engaged in publishing magazines, books, pamphlets, or the various miscellaneous publications list in Part VII, Inquiry I, Section D, of Form MC73A-2. This involves establishments engaged in the manufacture of all types of cards: greeting, picture postcards, souvenir cards, etc.; shopping news; sheet music; bluebooks, directories, almanacs, catalogs,

MAKEREADY

On Stock To Be Run On Job

ONE of the favorite questions debated at old printers' get togethers is "Should makeready be based on impressions pulled on the stock to be run or not?" There are two divisions in makeready, as used to describe underlaying, interlaying and overlaying. The first part is devoted to leveling the form to type height in order that the form rollers, the better half of presswork, may function fully. In leveling the form much is also accomplished toward obtaining a uniform print from the entire area of the form. But still to be met are problems occasioned by bear-off of the heavier areas' impression by lighter areas, and bear-off of the squeeze from the center of the form by its edges. This last phenomenon is repeated not only in the units of the form but even down to the smallest letter and halftone dot. This is a peculiarity of letterpress due to its cameo or relief forms which make it a punching on indention process as distinguished from a planographic process.

It should be obvious that the trial impressions for makeready should not be pulled necessarily on the stock to be run unless it is a well calendered sheet reasonably close to level. (An absolutely level sheet, even in coated paper, is not commercially possible). Only from such a sheet can the impression be calculated. Rough papers vary greatly in high and low spots from sheet to sheet as well as from ream to ream and do not yield a print which constitutes a guide for makeready except for the sheet on which the trial impression is pulled.

It will be found that it is economical of time in makeready always to use the same paper for packing sheets and to use this same paper for overlay base sheets. Then when a sheet with overlays is placed in the packing it is a sheet that calipers the same that is withdrawn and it is definitely known that nothing was added but the overlays to the impression.

However, it is well to pull impressions on the stock to be run as an aid to calculating the effects of bear-off.

Not only must bear-off be calculated as noted in the paragraph above but also in the individual halftone when making the cut overlay which applies varied squeeze to the highlights, halftones and near solids.

The reason for pulling extra trial impressions on stock to be used in making ready let's say on 60 or 70 lb. s. and s.c., is to gauge the effect of bear off on the stock if it is rougher than the s. and s.c. When adding the thickness of a folio to a line of say 48 pt. bold or the near solid of a halftone, it may make the print of these OK on s. and s.c. but not on a rough stock where it may appear broken. It is commonly known that rougher stocks require a stronger overlay with more pronounced gradation.

Since coated paper is the nearest to level and the smoothest printing surface and requires the least ink for coverage and is also very susceptible to offset and smearing, a supply of ink inclining toward scant should be used when making ready on it but rougher papers need and are printed with more ink so more ink than for coated can be used in makeready. This precaution serves to check an otherwise natural tendency to spend too much time getting the heavy areas to print as fully inked as the light. Always use less ink in makeready than seems needed for the production run.

Replacing a Tape

IT IS generally known that tapes must travel alike. Loose and tight tapes cause the sheet to travel faster on one end and this leads to various troubles. For instance, on a slitting job, it would cause the sheet to cut out of line toward the rear end. When delivering sheets into a box, it is necessary for the tapes to travel alike. The same is true if delivering into a jogger.

When installing a new tape, unroll a length from the roll, place it around a firm support and take out the slack by pulling on the length before cutting it from the roll. After cutting, dip the ends of tape in thin shellac and sew the lap while still moist. In this way a good joint which will wear well is secured.

TO THE PRINTER

Thinking About Tomorrow

THIS ADVERTISEMENT is addressed to the printing organization who is thinking beyond today's busy state. We are midwestern publishers of several technical trade journals. These magazines are now printed in large printing centers but we would like to move them to printers in smaller towns. Are you interested?

WE REQUIRE fairly large press sizes as each magazine is 8⅛ x 11¼ trim, 80 to 96 pages with a 25 to 30 thousand run and has two colors in every form. We need a well balanced shop which has ample linotype equipment, a good bindery and some modern type faces for heads, etc.

TO SUCH A PLANT we will assign one or two of our magazines on a yearly contract basis. To the printer interested in becoming a publication printer — this is an unusual opportunity.

WRITE US. Tell us about your company and your plant. We'll give you plenty of credit and business references and a steady monthly volume you can count on. Today we buy about $300,000 worth of printing a year. You can have part of it.

Reply Box 303

PRINTING EQUIPMENT *Engineer*

1276 West Third St. Cleveland 13, Ohio

etc.; business services, loose-leaf and hardbound, including tax, credit, government regulations, cumulative indexes, etc.; maps, atlases, gazetters, and globe covers; and other miscellaneous publications such as racing forms, etc. Establishments engaged in publishing these items (regardless of the number of persons engaged) and all establishments which employed 10 or more persons in 1947 in printing, publishing and allied industries, are being sent Form MC73A-2. Since the forms, MC73A-1 and MC73A-2, cover all aspects of the printing and publishing industry, their activities are listed in considerable detail on the reporting form. However, each establishment is called upon to supply only the figures pertaining to the particular activities in which it is engaged.

The Bureau of the Census, in preparing for the 1947 census of the industries engaged in printing, publishing and allied activities, consulted with more than 300 printing and publishing trade groups and individual establishments in the development of these forms. Among those consulted were the American Newspaper Publishers Association; the National Association of Magazine Publishers, Inc.; the Book Publishers Council; the American Textbook Publishers Institute; the Printing Industry of America, Inc.; the Book Manufacturers Institute, and the Greeting Card Industry. Changes in the number, size, output, and geographic distribution of printing and publishing establishments which have occurred in the last eight years will be revealed by this census.

Hand Dipping Pot

A DISCARDED Linotype metal pot crucible has been converted into a hand-dipping pot in the ad alley of the Elmira (N.Y.) *Star-Gazette*, the *Advertiser* and the *Sunday Telegram* for filling in angular or other open spaces in advertising composition. To start with, the pot crucible was cracked so it was

first welded. Then a steel ring was made and the pot with a sheet steel jacket was suspended in the center of the ring. As is the case with machine metal pots, the space between crucible and jacket was packed with asbestos. The heat control mechanism (panel box) from the Linotype metal pot is used as the heat control of the hand dipping pot minus the mouthpiece rheostat circuit. The throat of the metal pot was cut off and the opening sealed.

A stand was made of angle iron at the top of which the pot in its metal ring was mounted. A sheet metal lid was made and hinged onto the steel ring so that it could be closed when not in use. The lid can be thrown back and become a resting place for the ladle with which the hot metal is dipped.

The idea was worked out by Electrician Ross Bundy.

New Company to Handle Maniform Collator

A. Dager, president of Dager Maniform Co. has announced that the manufacture and marketing of the Dager Maniform Automatic Collator will be handled by a new corporation. The new company will be known as The Maniform Corp., with offices at 7724 Maie Ave., Los Angeles 1, Calif. Phone is KImball 2336. Machines, states Mr. Dager, are now in production under the supervision of a highly skilled staff of engineers, tool and diemakers. All inquiries should be addressed to the new company at the address given above.

TOP PERFORMANCE

In Engraver's zinc as in baseball, top performance needs top quality material. Imperial Zinc is top quality in *any* man's league. That's why Imperial users get higher quality work, have less production losses, save tempers and dollars every day in the year.

Imperial Zinc has Redibak, the pre-applied acid resist on the back, and Rediface on top to protect the face from dirt, grease and corrosion until you are ready to use the zinc.

Investigate Imperial Zinc now—it's good for homers in your park, too!

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

Philadelphia 34 New York 7 Chicago 50

Imperial ZINC

TECHNICAL BOOKS

The books listed below may be ordered through Printing Equipment Engineer, 1276 W. Third St., Cleveland 13, Ohio. Because of narrow handling margin, please send remittance with order.

GENERAL

MATERIALS HANDLING—By Harry E. Stocker. This book is of vital interest to mechanical and production executives in printing and publishing plants. While not written specifically as a treatise on materials handling in the printing plant, yet a great deal of its text will be of value in the handling of materials in the plant and out-going shipments from the plant. Bound in light buckram, 309 pages, many illustrations, size 6 in. by 9¼ in. Price $5.35 plus 25c postage and handling.

HOW TO HANDLE COLLECTIVE BARGAINING NEGOTIATIONS—Report based on a survey conducted by the National Foremen's Institute. Points out errors and fallacies which have tripped management in the past and how to avoid these mistakes in the future. Multon binder. 42 sheets, 9½ by 11½ in., $5.00 plus 25c postage and handling.

HOW TO HANDLE LABOR GRIEVANCES—By Dr. John A. Lapp. Dr. Lapp discusses a practical treatment in the five part manual. Titles of the parts are: Background and History of Grievance Procedures; Grievances and How to Deal With Them; Grievance Procedures in Selected Industries; and Problems of Grievance Procedures. Bound in buckram cloth, 294 pages, 5½ by 8 in., $4.00 plus 25c postage and handling.

INDUSTRIAL ELECTRONICS MAINTENANCE—An elementary explanation of the elementals of electronic circuits and devices, many of which are adaptable to the production operation of equipment. Among these are motor drives and controls, relays and measuring circuits, regulators, servo systems and automatic machinery controls. By R. C. Roetger. Size, 5½ in. by 8¼ in.; blue crash cloth, gold stamped titles; 190 pages; well illustrated. Price, $3.50 per copy plus 25c postage and handling charge.

STANDARD BOOK ON ESTIMATING FOR PRINTERS—By Fred W. Hoch. A book on the mechanics of printing plus estimating schedules, including chapters on estimator's work, paper, slug composition and trade typesetting, monotype composition and copyfitting, hand composition and page makeup, imposition and lock-up, presswork, makeready, press-running, two-color flatbed, flatbed, perfecting presses and process printing, ink and bronzing, cutting, folding, stitching and trimming, miscellaneous bindery operations, art work, engraving, electrotypes. 268 pages, 6 in. by 9½ in., 97 reference tables, 26 diagrams and forms, 7 graphs and charts. $3.75 per copy plus 25c postage and handling.

ART AND TECHNIQUE OF PHOTO-ENGRAVING—By Julien J. Soubiran. Steps for the production of engravings are explained for the buyer of engravings or those who should be familiar with the process. Described are the types of photo-engravings, surprinting, copy preparation, color progressives, benday values and tone charts. Size 5½ by 7¾ in., 88 pages, $1.50 plus 25c postage and handling.

STEREOTYPE

MANUAL OF STEREOTYPING—By Joseph Goggin. This 256-page book conveys technical information and manipulating procedure. Written by a practical stereotyper. Price $5 cash with order, plus 25c postage and handling.

OFFSET-LITH

LITHOGRAPHERS MANUAL—Compiled by Walter E. Soderstrom. Second revised edition. Technical information from copy to finished jobs. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy plus 25c postage and handling.

THE SINGLE COLOR OFFSET PRESS—By I. H. Sayre. The purpose of this book is to offer a detailed technical explanation of the operation of the small single color offset printing press. It also carries recommendations for approved methods of printing technique and press care which apply to all offset printing. Much of the technical operating information applies to all makes of small offset presses. Illustrated with 99 figures in line and halftone; 284 pages; size, 6 in. by 9¼ in.; bound in blue cloth, cream stamped lettering. Price $6 plus 25c postage and handling.

PHOTOGRAPHY AND PLATEMAKING FOR PHOTO-LITHOGRAPHY—By I. H. Sayre. This is an instruction book and an encyclopedia, both for the beginner and the experienced offset-lith platemaker. Revised edition. Illustrated. New section on color process platemaking techniques included. Price $6.50, plus 25c postage and handling.

PRESSROOM

PRESSROOM PROBLEMS AND ANSWERS—By Fred W. Hoch. Might be considered a miniature encyclopedia since it contains answers to 334 pressroom problems which have been answered by Mr. Hoch. Written in language of journeyman pressman. Pressmen, production men, paper and ink manufacturers, electrotypers and photo-engravers will find this book of high utility when pressroom problems arise in which tendency is to lay blame on furnished materials used in pressroom production. Size, 6 in. by 9½ in., 258 pages, gold stamped blue cloth. Price, $3.50, plus 25c postage and handling.

HOW TO ADJUST WORK-UPS—By Wm. H. Lichter and Geo. F. Smalley. Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and-or elimination of work-ups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy plus 25c postage and handling.

HANDBOOK FOR PRESSMEN—By Fred W. Hoch. Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts, $3.50, plus 25c postage and handling.

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Patents For The GRAPHIC ARTS FIELD

Covering patents issued February 10, February 17, February 24, March 2 and March 9.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issuing each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating

See also patents 2,435,881 and 2,435,915 under "Feeding, Folding, and Delivery" heading.

2,436,192. CARD CUTTING MACHINE is for severing predetermined lengths from a continuous roll of material for use as statistical punch cards which must be extremely accurate in size. Pairs of opposed roller bearings are mounted at one end of the base which supports the entire machine. The bearings receive therebetween the shaft of a reel of paper of uniform width. Opposed plates intermediate the ends of the frame have a drive shaft journaled therein. Shaft has a large pulley at one end which is connected to a motor utilized to continuously operate both the feeding mechanism and the reciprocatory cutting mechanism. Paper is drawn from roller by a pair of superposed feed rollers. From these rollers the strip is extended in a long loop downwardly and then upwardly through a rigid guide having its outlet end arranged in juxtaposed position to a second set of feed rollers, likewise supported in the opposed plates and driven by a gear arrangement from the first set of rollers. Paper is fed through two vertical guide plates to avoid lateral shifting. The cutting mechanism is of the reciprocating type and operates through a pulley connected to the shaft of the feeding mechanism. The cutting mechanism at delivery end of the machine comprises a base supporting a stationary die plate of the size of the card desired. A vertically reciprocating head is guided in its movements relative to the die plate by four posts. Head is reciprocated by a pair of rocker arms. A movable die plate cooperates and is arranged to intermittently stop the movement of paper through the cutting mechanism and to hold it while it is being severed. Cutting is accomplished by two blades secured to the middle of opposite ends of the vertically reciprocating head. A third blade, associated with one of the other blades, severs one corner of the strip as is customary in making statistical punch cards. When stoppage of the strip occurs for the instant necessary to sever the paper, the paper buckles upwardly to form a loop between the feed rollers and the cutting mechanism. The creation of the temporary excess of material is utilized to activate an elongated leaf spring which, subsequent to a severing operation, operates to straighten out the temporary loop formed in the strip and thus feed the free end of the strip into the cutting mechanism preparatory to another severing operation. Die plate moves in unison with the head until it contacts paper strip previously fed into position. When head and plate come together further movement of the strip through the mechanism is stopped. Severed strip is fed outwardly by a pair of rollers associated with the cutting mechanism to a pair of discharge rollers. Invented by Karl J. Braun, Merrick, N. Y. Assigned to Control Instrument Company, Inc., Brooklyn, N. Y. Application January 5, 1945. 10 claims.

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Composing Room Equipment

2,436,691. SPECIAL CHASE ARRANGEMENT is provided for printing name-lines on greeting cards to permit change of set-up for accommodating name-lines of varying lengths. A minimum of time is required for the operation which is accomplished by arranging the chase furniture so that a number of vertically spaced, parallel slots are formed. Slots are adapted to receive standard "Linotype" slugs to-

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by JOSEPH D. GOGGIN

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A Glossary and Encyclopedia gives definitions of terms used in the stereotype process. Bound in black cloth, gold stamped, 256 pages, size 5½ in. by 8 in. Price, $5, cash with order. Handling margin makes it necessary that cash accompany all orders for books.

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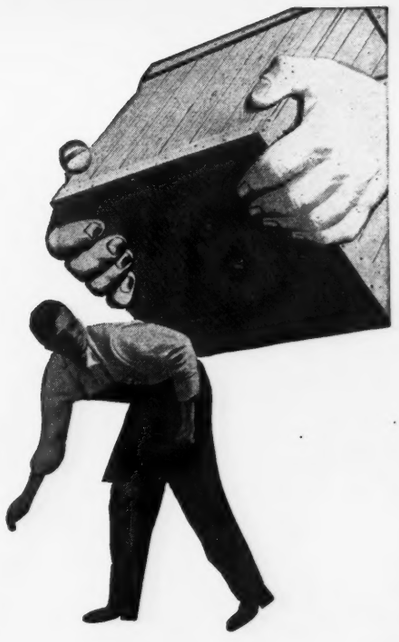

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gether with fillers of various lengths. Each slot and each filler carries insignia representative of its size. The procedure for printing a large quantity of cards with name-lines of different lengths is simplified by preparing the name-lines for each set, marking the size of filler required on each set, and stacking the sets accordingly. The name-lines and proper fillers may be inserted in the chase without removing it from the press. Invented by Clarence H. Freund, Wilmette, Ill. Assigned to Clarence H. Freund, Irene Freund, John W. Walz, and Agnes Loretta Walz, copartners, doing business as Nu-Art Engraving Company, Chicago, Ill. Application April 11, 1946. 4 claims.

Feeding, Folding, and Delivery

2,435,881. WEB FOLDING MECHANISM is for folding sheets of paper by the "tuck and nip method." It comprises a tucker cylinder on which a tucker blade is flexibly mounted. This cylinder carries the cut-off sheet by means of pin points or grippers. The blade tucks the center of the sheet between the open jaws of a mating jaw cylinder. The jaws close to complete the fold. As the two cylinders continue to rotate, the tucker blade is withdrawn from between the jaws leaving the folded book, or sheet, or signature held within the jaws. The invention overcomes the tendency of withdrawing blade from prying apart the folded paper, especially at high speeds. Pins are provided for holding the fold of paper within jaws during withdrawal of tucker blade. The pins are forced through the fold prior to withdrawal of the blade and are withdrawn from the fold prior to opening of the jaws. Invented by Harry W. Faeber, Larchmont, N. Y. Assigned to Time, Inc., New York, N. Y. Application November 28, 1945. 14 claims.

2,435,915. SHEET HANDLING APPARATUS includes improved hydraulic mechanism for intermittently actuating a pile elevator employed to support and elevate a pile of sheets into position for feeding by hand or automatically one after another from the top of a pile to a stitching or taping machine. The hydraulic mechanism includes a fluid control valve which in association with a pump eliminates all fluid by-pass means heretofore necessary to enable continued operation of the pump without corresponding movement of the pile elevator. Feelers engaging the top of the pile control the valve. The arrangement is such that the valve is retained in open position for a short period after the pile engaging means has operated to close the valve. Invented by Leo C. Williams, Pearl River, N. Y. Assigned to Dexter Folder Co., Pearl River, N. Y. Application January 6, 1942. 17 claims.

2,436,168. SHEET FEEDING MECHANISM is described as embodied in a stencil duplicating machine but it may also be embodied in gelatin and spirit duplicators as well as in printing presses that require the delivery of one sheet of paper at a time from a pile of sheets. The mechanism is disposed in a position above the stack and is mounted for a forward and rearward reciprocation of the stack for each rotation of the stencil cylinder. Fingers frictionally grip the top sheet of the stack during rearward movement of the mechanism and move the sheet rearwardly so that its rear margin engages and rides up on laterally spaced inclined surfaces at the rear of the stack. This elevates the margin and disposes its edges against stops on the inclined surfaces, at which time the fingers release the top sheet. In the final part of the rearward movement a hook passes rearwardly of the elevated rear edge of the top sheet. As soon as the forward movement of the mechanism starts, the sheet is engaged by the hook and pushed forwardly of the stack and delivered from the front end to the stencil cylinder. The sheet engaging fingers are in an annular head at the end of a long pivotable rod. The head holds a frictional gripping finger made of rubber. The fact that fingers can be moved on a wide arc allows them to engage paper at lateral margins where lint picked up from handling of cheaper grades of paper will not accumulate upon the stencil in an area that will cause blurring of the print made on long runs. Parts, normally overhanging the stack, may be swung out-of-the-way for reloading of sheets. Invented by Sherlie E. Gregory, Aurora, Ill. Unassigned. Application December 29, 1945. 14 claims.

2,436,765. SHEET GRIPPER MECHANISM is designed for use with printing presses of the Davidson type as shown

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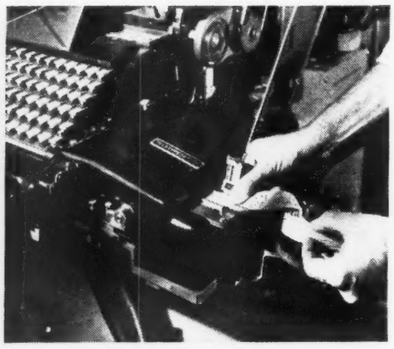

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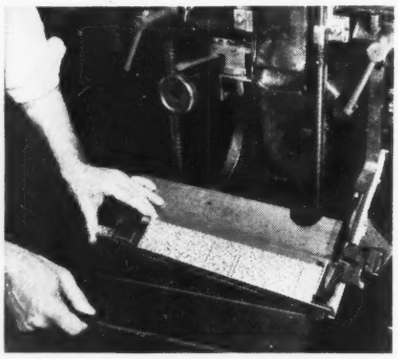

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Challenge

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in patents 2,387,750 and 2,306,044. An object is to use a single gripper which is so timed and controlled that sheets are accurately registered and may be gripped very near the printed edge without smudging. Feed rolls are eliminated. The gripper, which is in the form of a spring loaded shaft normally biased in one direction, is carried by an endless chain which also extends around the printing cylinder. A spring loaded anvil carried by the gripper shaft is adapted to engage the sheet and normally extends beyond the periphery of the printing cylinder. Grip fingers are also carried by the shaft and are normally arranged in a position away from the anvil. A control cam follower and a cam plate are associated with the grip shaft and the endless chain, the follower being positioned on the grip shaft and the cam plate being positioned in the path of the endless chain. By this arrangement, the control acts, at a predetermined position of cam, to cause anvil and grip fingers to engage and grip a sheet. The control then pivots the grip fingers and anvil in an opposite direction to the normally biased position of the shaft so as to place the sheet engaging portion of the anvil within the periphery of the printing cylinder. In the next engagement of cam follower with cam plate, the control separates grip fingers from the anvil by movement of the grip shaft towards its normally biased position, automatically extending the anvil beyond the printing cylinder periphery. Invented by William Ward Davidson, Evanston, and Nils Trydal and Frank J. Breman, Chicago, Ill. Assigned to Davidson Manufacturing Corp., Chicago, Ill. Application September 11, 1944. 13 claims.

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Plate Making

2,435,872. METHOD OF ELECTROPLATING CYLINDERS is applicable to rotagravure and makes use of the plated copper shells taken from used rotagravure cylinders that have served their purpose. The plated shell, that has been physically stripped from a previously plated cylinder, is physically manipulated into flattened arcuate form. It is held in such flattened arcuate form in the electrolyte in a position wherein it is in coaxial spaced relation to the cylinder to be plated while feeding the positive electric current to such shell to cause it to serve as a soluble anode whereas the cylinder to be plated serves as the cathode. Invented by Silas Coulson, Jackson Heights, N. Y. Unassigned. Application December 23, 1943. 9 claims.

2,437,005. PICTORIAL ILLUSTRATIONS ON METALLIC PRINTING PLATES are produced by treating the metallic surface with a lye and then applying to the surface a layer of sensitized emulsion. The desired picture is copied on the sensitized surface and then developed. The surface is coated with a solution containing a salt of a metal the position of which in the displacement series is below that of the metal of the printing surface and the metal salt forms an ink receptive metal deposit. Printing plates are said to possess extraordinary precision and great durability. The process is not only intended for direct work from the diapositive, but for transfer, and by means of practical adaptation, for intaglio. Invented by Egon Herbert Schwarz, Zurich, Switzerland. Unassigned. Application June 4, 1941. 4 claims.

Printing Inks and Related Chemicals

2,435,658. TEXTILE PRINTING PASTE AND PROCESS for achieving illuminated discharge effects upon cellulose acetate textile material that is dyed with a dischargeable azo ground color is disclosed. The process includes locally applying a discharge printing paste to the material in a predetermined pattern. The paste comprises a discharge agent of acid reaction, an illuminating color comprising the sulfuric acid ester of a leuco vat dyestuff, a swelling agent for the cellulose acetate material and sodium nitrate. The ground color is discharged and the vat color is developed to the final shade by entering the discharged fabric into an acid bath containing from one-half to four percent of sulfuric acid and from 0.05 to 2% of sodium bichromate. Invented by George W. Seymour, George C. Ward, and Robert L. Hunter, Cumberland, Md. Assigned to Celanese Corporation of America, New York, N. Y. Application July 19, 1944. 10 claims.

2,435,992. PRINTING INK COMPOSITION is adapted for use on fibrous food containers for milk, butter or fat. The ink consists of a cellulose compound of the class consisting of ethyl cellulose and nitro cellulose and 2-ethylhexyl alcohol as a solvent. A wetting agent in proportions by weight of the finished composition of from 5 to 30% of the cellulose compound and from 40 to 60% of the solvent and a color pigment such as carbon black is used. The composition is further characterized by being non-hygroscopic while on the printing press and odor-

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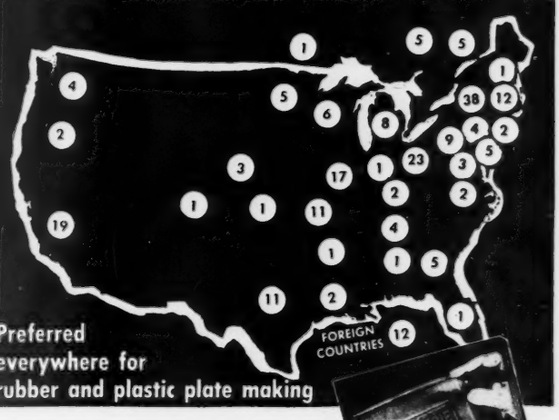

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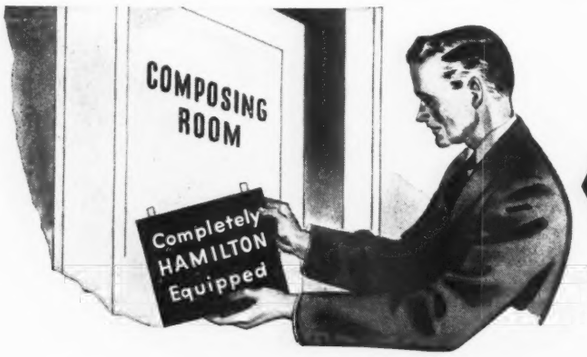
less after drying. The contents of the container are thus protected against odor and off-flavor. A small proportion of beeswax is optionally used. Invented by Herbert J. Wolfe, Maspeth, and Paul W. Greubel, Long Island City, N. Y. Assigned to American Can Company, New York, N. Y. Application July 27, 1945. 2 claims.

2,436,059. DISCHARGE PRINTING OF COLORED CELLULOSE ACETATE FABRICS is accomplished by a process which includes treating the fabric with an acid inorganic thiocyanate such as barium thiocyanate and an organic swelling agent, e.g., glycerol and glycols, whereby a considerable amount of the acid inorganic thiocyanate and the swelling agent is impregnated in the fabric. The fabric is passed in dried condition to a roller printing machine. The colored textile fabric is discharge printed with an alkali metal formaldehyde-sulfoxylate white discharge printing paste and an alkali metal formaldehyde-sulfoxylate vat color discharge printing paste whereby white and colored objects, wherein the color of the colored objects differs from that of the colored textile fabric, are obtained on the colored textile fabric. Wetting agents of the sulfated fatty alcohol type, such as sodium lauryl sulfate, are usable. Gum Karaya is used in the printing paste compositions. Invented by Herbert G. Scull and James G. McNally, Rochester, N. Y. Assigned to Eastman Kodak Company, Rochester, N. Y. Application March 4, 1943. 8 claims.



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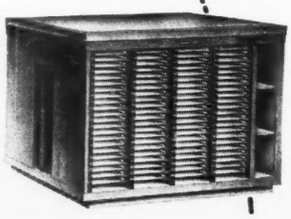

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2,436,697. SULFOFLUORIDES OF AZOIC DYESTUFFS have fast shades of yellowish-orange to scarlet. An orange pattern of reddish shade is obtained by combining 4.45 parts of 3-amino-4-methyl benzene sulfonyl fluoride in 50 parts of water containing 9.2 parts of hydrochloric acid (1.19) which is diazotized at low temperature by the addition of 1.64 parts of sodium nitrite dissolved in 5 parts of water. The diazo solution is diluted to 74 parts by volume and 8 parts of this solution are then diluted with 12 parts of water and treated with 10 parts of 5% sodium acetate solution and 70 parts of a suitable carbohydrate thickener. This paste is printed from an engraved roll on cotton piece goods which have been impregnated with 2-hydroxy-3-naphthoic acid anilide in an alkaline solution. Invented by Hans Zacharias Lecher, Plainfield, Robert Prescott Parker, Somerville, and Corris Mabelle Hofmann, Bound Brook, N. J. Assigned to American Cyanamid Company, New York, N. Y. Application July 31, 1944. 13 claims.

2,436,791. TYPOGRAPHIC AND LITHOGRAPHIC PRINTING INK is of the heat set type and dry prints are obtained in about two-thirds the time required for conventional inks. Conventional pigments are dispersed in a special varnish and solvent. A typical example consists of 19 parts carbon black, 1 part cocoa butter, 2 parts talc, 4 parts prussian blue in linseed oil (50%), and 4 parts alkali blue in linseed oil (40%), which are dispersed in 63 parts of varnish, 2 parts high solvency petroleum solvent No. 1 (dimethyl sulfate), 5 parts No. 5 litho varnish (bodied linseed oil), and 2 parts lecithin. The varnish used in the mixture consists of 40 parts phenol-formaldehyde resin-ester gum modified which is soluble in high solvency petroleum solvents but insoluble in Amberol F-7, 20 parts high solvency petroleum solvent No. 1 (dimethyl sulfate), 10 parts high solvency petroleum solvent No. 2 (dimethyl sulfate having a different boiling and distillation range), and 30 parts petroleum diluent (also dimethyl sulfate but with a third and different boiling and distillation range). Invented by Frank W. Cray, New York, N. Y. Assigned to Interchemical Corporation, New York, N. Y. Application May 31, 1941. 1 claim.

2,436,954. PRINTING INK is press stable against moisture received from the atmosphere under conditions of relatively high humidity yet sets with extreme rapidity, after imprinting, when moisture is applied to it in the form of steam, water bath, spray or the like. It comprises coloring matter such as carbon black, Milori blue pigment, etc., dispersed in a vehicle comprising as essential ingredients, in admixture, a solvent for the binder which is also water miscible and which may be a water-soluble glycol or a monoether thereof, a water precipitable rosin-maleic type binder constituent in the solvent, and a heat-reacted neutral triethanolamine resinate in the proportion of 4% to 33% of the ink. Invented by Richard A. Denton, Riverton, N. J. Assigned to Sun Chemical Corporation, Harrison, N. J. Application January 29, 1944. 8 claims.

2,437,554. DYESTUFF SUITABLE FOR PRINTING TEXTILE FIBERS is made up of a water-soluble acid amide, an ester salt of a leuco vat dyestuff and a water-soluble, stable internal

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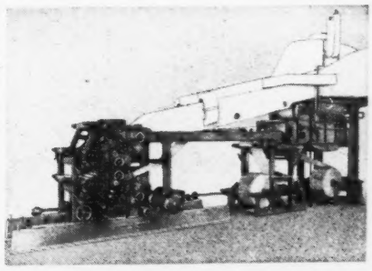

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salt of a tertiary to quaternary amino acid selected from the class consisting of betaines which contain an aralkyl radical sulfobetaines which contain an aralkyl radical. Invented by Roger Ratti, Neu-Allschwil, near Basel, and Philipp Brandt, Basel, Switzerland. Assigned to Durand & Huguenin S. A., Basel, Switzerland. Application November 29, 1943. 13 claims.

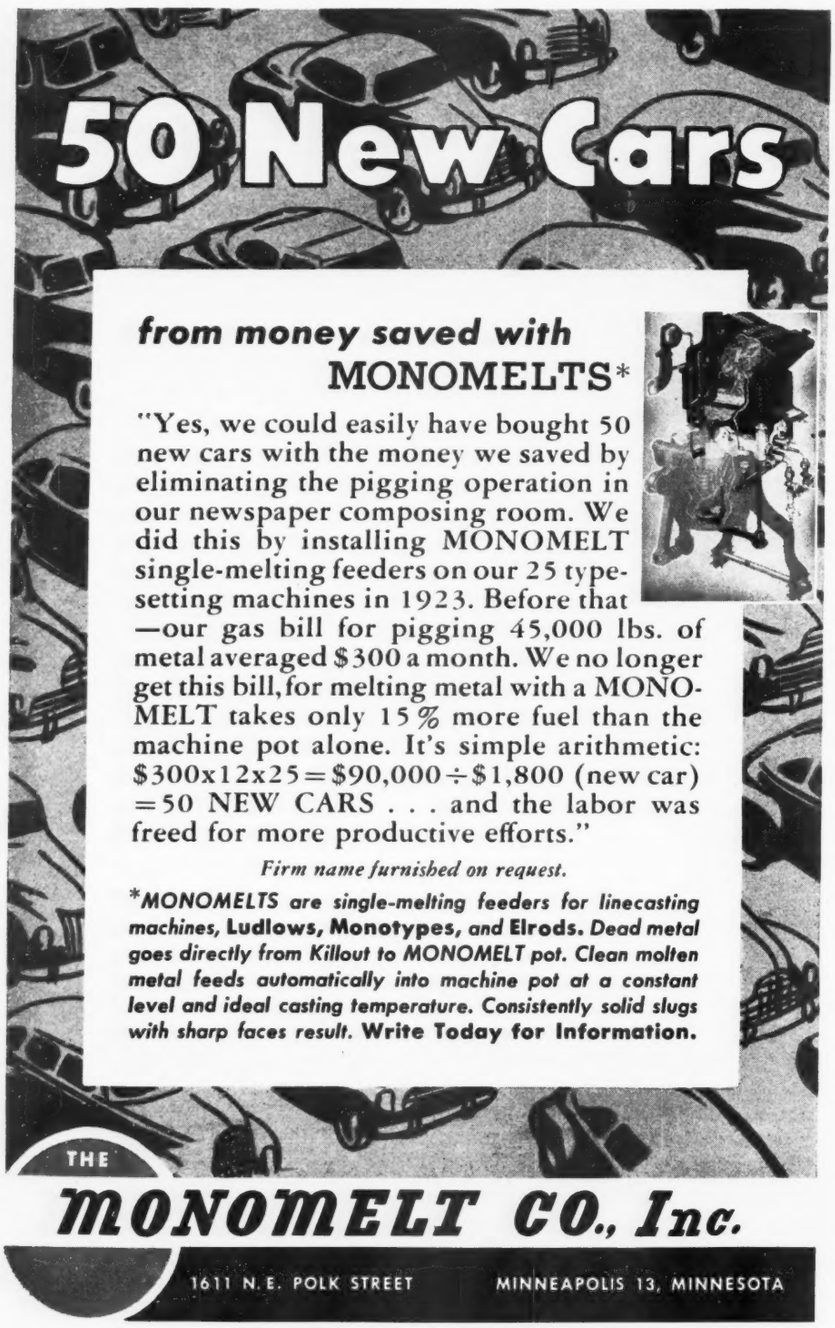
2,437,644. SULFOFLUORIDES OF AZOIC DYESTUFFS may be produced as pigments in the conventional way by diazotizing an amino benzene sulfonyl fluoride free from water solubilizing groups and coupling with an ice color coupling component such as an arylamide of an acyl acetic acid in the presence of an acid binding substance. Pigments are yellow to yellowish-orange in color and are insoluble in water. The most important practical field of the colors is in dyeing cellulosic material. Colors may be readily dyed or printed on cellulosic material in the conventional manner. Invented by Hans Zacharias Lecher, Plainfield, Robert Prescott Parker, Somerville, and Corris Mabelle Hofmann, Bound Brook, N. J. Assigned to American Cyanamid Company, New York, N. Y. Application July 31, 1944. 12 claims.

Printing Presses and Equipment

2,435,791. ROTARY MULTICOLOR PRINTING PRESS can be readily converted to print on one or both sides of a traveling web without requiring material changes in the press structure. The press is provided with gears, guide rolls and feed rolls which may be located in either the lower or upper position for accomplishing the perfecting or non-perfecting of the traveling web, respectively. The press is convertible and certain of the mechanisms may be rearranged or substituted by other printing mechanisms to print with any selected kind of ink, whereby aniline, rotagravure, oil ink, or offset printing may be produced. The rotary multicolor printing press includes base frames, top frames, roll frames and press frames. Changeable brackets project right and left from the press frames. A web supply roll is provided and two upper series of web guide rollers are carried by the top and roll frames and a lower series of web guide rollers is carried by the base frames. Two adjacent stacks of printing units are carried by the press frames, and the web is led over one of the upper series of guide rollers, through both stacks of the printing units, and over the other upper series of guide rollers for non-perfecting the web and over the lower series of guide rollers, through both stacks of the printing units and over the upper series of guide rollers for perfecting the web. The movement of one stack of the printing units is reversed when perfecting the web. Invented by Hans J. Luehrs, Westerly, R. I. Assigned to C. B. Cottrell & Sons Company, Westerly, R. I. Application April 29, 1942. 9 claims.

2,436,455. INKING MECHANISM is adapted for application to a bed and cylinder press, e.g., the well-known Kelly press as shown in patent 1,700,680 of 1929. In the preferred embodiment a primary ductor roller is arranged to oscillate to and from contact with the fountain roller. A secondary ductor roller is arranged to oscillate to and from contact with the first roller or ink drum of the usual train of inking and distributing rollers adjacent the path of the printing plate. Between the two ductor rollers there is disposed a set of continuously rotating working rollers which may include a vibrating roller of the McKinley type. This intermediate group of rollers is adapted to be intermediately contacted by the ductor rollers and is designed to thoroughly triturate or "cut up" the ink preparatory to applying it to the pyramidal system of inking and distributing rollers. With this arrangement a particle of ink travels almost twice as far as in the ordinary press of this type before it reaches its destination on the form. Invented by Frederick W. Seybold, Westfield, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application March 8, 1944. 14 claims.

2,436,761. TEXTILE PRINT BLANKET is characterized by a surface formed of a series of minute parallel longitudinal channels which are of triangular configuration. As the pressure applied by a color roll is transverse of the blanket, the channels maintain their dimensions to a definite degree. Printing colors tend to travel along the channels and do not turn laterally to run under the goods. The triangular configuration of the grooves also makes it possible to thoroughly wash the blanket with rotary brushes and to effectively dry them with a squeeze roll. Invented by William C. Ross and Stephen B. Neiley, Winchester, Mass. Assigned to Dewey and Almy Chemi-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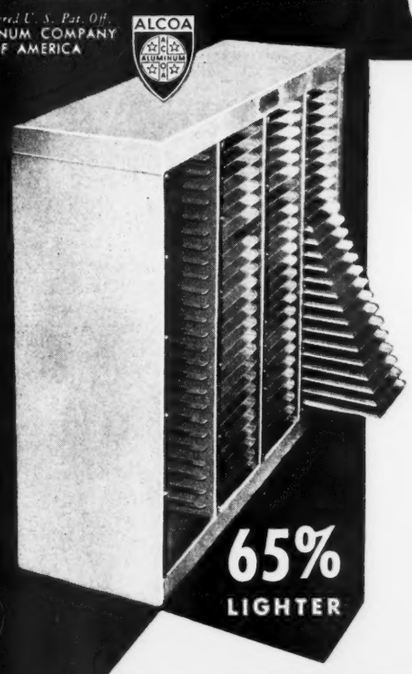

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10" x 16"	69c ea.	65c ea.	60c ea.	65.00
12" x 18"*	79c ea.	75c ea.	70c ea.	69.00
10½" x 23½"	95c ea.	89c ea.	80c ea.	
8½" x 23½"	79c ea.	75c ea.	70c ea.	69.00
6¼" x 23½"	69c ea.	65c ea.	60c ea.	65.00
3½" x 23½"	65c ea.	60c ea.	57c ea.	

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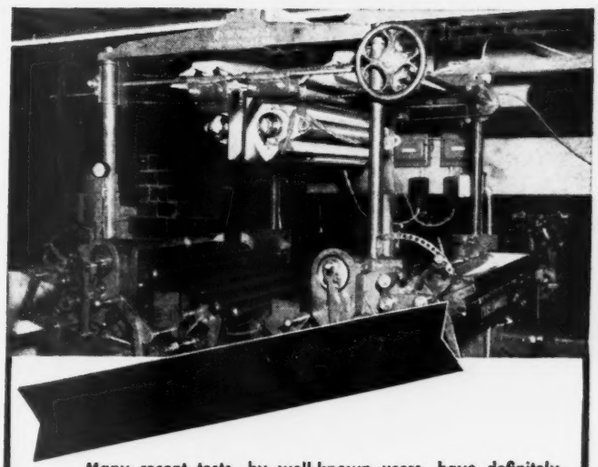

Many recent tests, by well-known users, have definitely established the value of Doyle Infrared Sheet Dryers, both for pre-conditioning paper stock ahead of the impression and for quick-setting of ink following impression.

Illustrated is a typical installation on a Webendorfer Web Offset Press.

At your request we shall be glad to send you complete technical data on Doyle Super-Power Infrared Sheet Dryers. The J. E. Doyle Co., 1220 W. 6th St., Cleveland 13, Ohio.

Doyle **INFRARED Sheet Dryers**

cal Company, North Cambridge, Mass. Application October 24, 1944. 3 claims.

2,437,050. LITHOGRAPHIC DAMPENING ROLLER includes a longitudinal bearing shaft having three spaced, radially extending longitudinal ribs. Two semi-cylindrical roller sections are hinged along one longitudinal edge to the center rib of the three ribs and arranged to swing into and out of contact with the other ribs. Complementary hub sections are arranged at the ends of the two semi-cylindrical roller sections. A holding cap is threaded on each end of the longitudinal bearing shaft where it is arranged to engage over the complementary hub sections when closed. An absorbent covering for the roller sections has its longitudinal edges turned in around the longitudinal edges of the sections. Sections are maintained in closed relation by means of a securing rod passing through a series of interpenetrating lugs on the free edges of the roller sections. By use of the invention, one dampening roller in contact with a lithographic plate keeps the plate sufficiently dampened for good working conditions. Invented by Armand C. Schulz, Milwaukee, Wisc. Unassigned. Application February 5, 1945. 3 claims.

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Equipment and Supplies

(Continued from Page 38)

Photo-Composing Machine Bulletin

RUTHERFORD Precision Photo-Composing (Step and Repeat) Machines are illustrated and described in a four page bulletin issued by Rutherford Machinery Div. of Sun Chemical Corp. Well illustrated, different features of the machine are described carefully.

Morrison Slug Stripper

IN A 4 page, 8½ in. by 11 in. well illustrated bulletin, The Morrison Co. describes its Slug Stripper, by means of which line-slug, Ludlow, foundry and Monotype type can be trimmed off to 16 ga., electro or shell stereo height where it is advantageous to make price or word corrections, initial letters and lines of type in plates and to avoid mortising bases. The Stripper is fully explained.

Kodak Fluorescence Process

THE technique of using Kodak Fluorescent Water Colors and the advantage to the printing buyer, commercial artist, and the photomechanical worker are explained in a new booklet, *Kodak Fluorescence Process for Automatic Color Correction*, announced by Kodak. Pointing out that artwork prepared with Kodak Fluorescent Water Colors can be faithfully reproduced with a minimum of hand color correction and in less time than it takes to produce plates from artwork prepared with conventional colors, the booklet sketches the advantages in the production of children's books, car cards, greeting cards, book jackets, and other published materials that depend largely on artwork for illustrations.

The booklet includes a number of examples showing the results obtainable with various techniques. Copies of the booklet may be obtained by writing to Graphic Arts Sales Div., Eastman Kodak Co., or *Printing Equipment Engineer* will pass along your request.

Rustproof Coating

A RUST preventive by which a clear film is deposited on metal surfaces has been announced. It is named Kano Rustproof. It is applied cold by dipping, spraying or brushing and dries in about 15 min. to a hard and dry surface. Manufacturer claims it is tough, flexible and non-porous; it has the capacity of creeping under and displacing moisture and finger prints, thus avoiding the spotty rust on polished surfaces, due to handling.

Kano Rustproof may be removed with any petroleum solvent although it is not

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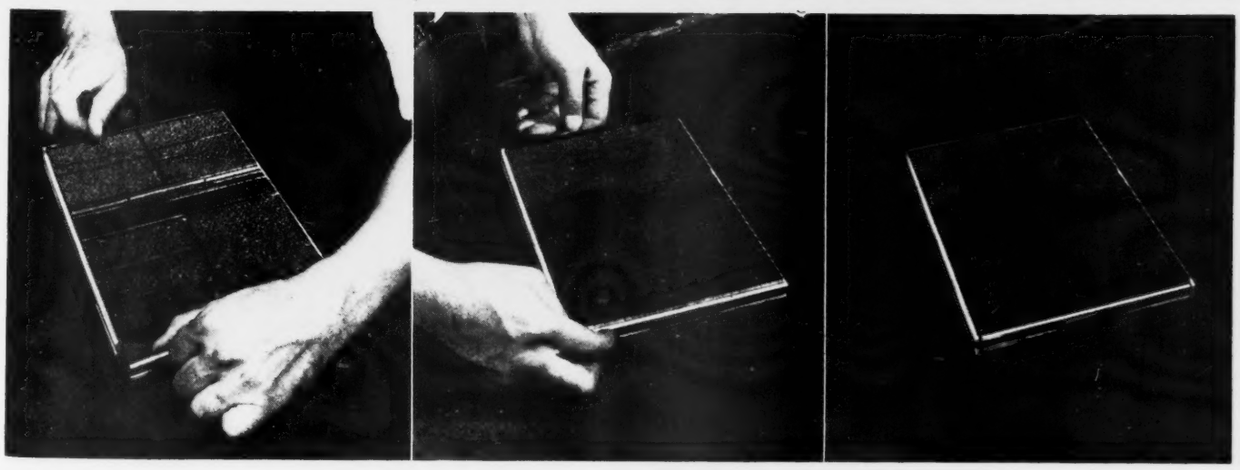

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necessary to remove it prior to painting. Some users apply it to polished and ground surfaces on machines. According to reports, Kano Rustproof offers protection under ordinary indoor conditions for periods up to 6 months and more. Kano Laboratories will answer your request for further information, or you may send your request to *Printing Equipment Engineer*.

Southworth to Make Post Envelope Press

SOUTHWORTH Machine Co., announces it has secured the patents and exclusive manufacturing and sales rights of the Post Lightning-Speed Envelope Press. Melville C. Cole, President of Southworth, who announced the agreement, stated the press would henceforth be known as the Southworth-Post Lightning Press.

Among the features of the machine pointed out by Cole are its ability to print 10 to 18 thousand envelopes per hour, prints both face and flap of the envelope in one operation, handles any size envelope from a No. 5 to a No. 12, prints from type, linotype, electros or rubber plates.

The Post Press was invented by Claude L. Post of Chicago and was manufactured by him at his Chicago plant until production was interrupted by the war. Due to Mr. Post's death in 1944, postwar production has been limited to the repair and rebuilding of used machines.

Production will be started immediately and it is expected that initial deliveries will be made sometime in May.

Induction Motors Available

BECAUSE current production of G-E single-phase, integral-h.p. motors—one to 7½ h.p.—has been increased five times that of prewar level, these motors are now largely available for immediate delivery in the ratings principally demanded, according to W. H. Henry, manager of General Electric's Small and Medium Motor Divisions. Where a particular rating is not in stock, shipment can be made in a few weeks.

These motors, among other applications, are used in small manufacturing plants where only single-phase power is available. They are simply constructed and are easily maintained.

Mr. Henry also announced that 3-phase open motors up to 75 h.p. are being shipped either from stock or on a normal prewar shipment cycle, and that enclosed, non-ventilated motors are also in an "almost stock" position. Production of totally-enclosed, fan-cooled motors, Mr. Henry said, is expanding rapidly to the point where these motors will soon be on stock or normal shipment basis.

"Since the 3-phase open induction motor is really the 'bread and butter' motor for almost all industry," Mr. Henry said, "we regard our increased production as a definite contribution to the industry-wide effort to accelerate production to meet current demand and at the same time help reduce the inflationary trend."

Forms Engineering Firm

H. Earle Runion, formerly of Serge A. Birn, Louisville, Ky., has announced the formation of a new company. The new firm is known as H. Earle Runion Production Engineering Co., and the address is 2340 Grinstead Drive, Louisville 4, Ky. The firm is specializing in the newspaper and commercial printing industries and handles plant layout, production analysis, job evaluation, production planning and control, work performance standardization, work methods improvement, and cost control.

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SYNTHETIC RUBBER ROLLERS

CARRIER-HOIST

(Continued from Page 34)

length of electric cord is provided so that the plug may be inserted in any outlet and the hoist moved around for a considerable distance without changing to some other outlet. Time of loading and unloading operations is from 8 to 9 sec.

Because of its design, the roll of paper swivels over the hoist mechanism when the roll is being unloaded. The hoist requires minimum space and is compact.

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Characters in Complete Font

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18-pt. No. 6091	14A- 3.25	28a- 3.85	7.10
24-pt. No. 6091	10A- 4.45	20a- 5.05	9.50
30-pt. No. 6091	7A- 4.65	14a- 5.50	10.15
36-pt. No. 6091	5A- 5.70	10a- 6.75	12.45
48-pt. No. 6091	4A- 7.80	8a- 8.60	16.40
60-pt. No. 6091	4A- 11.10	6a- 10.00	21.10
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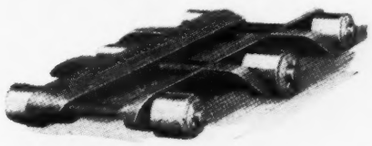

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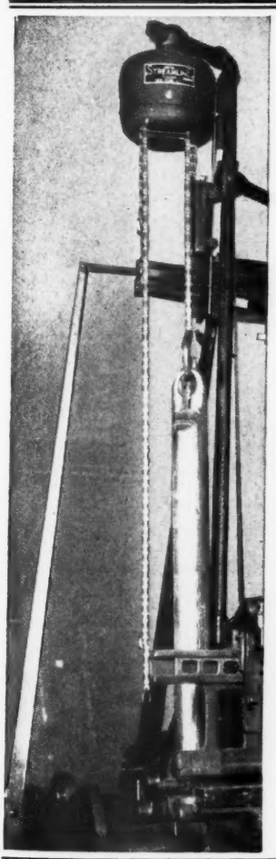

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The frame of the hoist is made of hollow tubing thus obtaining considerable tensile strength but without undue weight. The lifting mechanism is built on a rigid swivel, the hydraulic pump having a pressure of 1000 lbs. and using common automobile oil of the 10-20 weight. A 2 h.p. motor operates the lifting mechanism.

Operation of the hoist is simple. After the roll of paper has been rolled onto one end of the hoist, a valve is turned which sets the hoist in motion. Because the hoist mechanism is built on a rigid swivel, it moves slightly as the hoist operates to maintain the proper angle for the operation of the hoist. A mercury switch with a magnetic contact acts as a cut-off when the roll has reached the required height, thus making the stopping of the hoist automatic. This switch, however, is adjustable so that changes may be made to deliver the rolls to different heights.

The pressure in the hoist is held by a check valve until the pressure is released by opening the valve when the hoist begins to revert to the loading or opposite position. In cases where it is desired to raise the roll higher than the hoist has been adjusted for, it is possible to slightly raise the hoist with ease if not without manual aid.

The hoist is mounted on two automobile wheels with regular tires. These wheels are easily removable in the same way that automobile wheels are removable. There are two casters, one on either side of the hoist so that when the wheels are removed the hoist will roll on the casters instead of the automobile wheels. The equipment is 34 in. wide by 6 ft. long by 36 in. high.

IN 35 SECONDS a Rouse Band Saw cuts a full galley of slugs **to variable measure**—automatically, accurately. No gauge setting is required—no clamping—no measuring! Slugs feed mechanically **at uniform speed.**

Teamed up with a type-setting machine, a Rouse Band Saw does the work of hours in minutes. It cuts slug-lines for all types of composition that require frequent changes of line measure.

MITERING MACHINES
COMPOSING STICKS
SLUG CLIPPERS
BAND SAWS
LEAD AND RULE CUTTERS
TYPE GAUGES

Write today for illustrated folder on this and other Rouse time-saving printers' equipment.

H. B. ROUSE & COMPANY
2214 North Wayne Avenue
Chicago 14, Illinois

For greater accuracy—specify Rouse Composing Sticks. An investment in Rouse equipment pays a handsome profit.

Thermoplastic Papers

(Continued from Page 33)

board, the effective band is wide, whereas on cellophane the band is relatively narrow. Because of this, it is necessary to have accurate thermostatic controls on any machine operation, which will compensate for differences in power load.

IV. Uniformity of Thermoplastic Coating Within A Run As Well As From Run to Run. Lack of uniformity of thermoplastic coating, may mean poor adherence, due to insufficient or excess adhesive in relationship to heat and pressure being used.

V. Maximum Range of Different Types of Surface Materials To Which Ideal Adherence May Be Obtained. The average conventional type thermoplastic label paper is suited from the point of view of ideal adherence to only a relatively few basic materials. To date, we have developed three thermoplastic label papers that are as close as anything that we know to being all-purpose thermoplastic adhesive papers. One of these known as Thermo-Kote CM-1, is a delay action type of thermoplastic which has been applied with ideal adherence to all surfaces tested with the exception of waxed paper. The other two are heat and pressure types of thermoplastic known as Thermo-Stix PGM and Thermo-Stix PA which have been applied with ideal adherence to all materials tested with the exception of lacquer coated paper.

Discusses Basic Types Developed

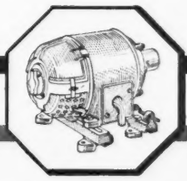
I will briefly outline the basic types of thermoplastics that we have developed. These are as follows:

I. *Thermo-Kote BM-1*—This is a delayed action thermoplastic coated paper, activated by heat and then applied under pressure. It has ideal adherence to such materials as paper, glass, board, all types of metal including stainless steel, wood, etc. At this point I would like to stress the fact that we differentiate between "Ideal adherence" and "useful adherence". Thermo-Kote BM-1 for instance may be applied to cellophane with what we call "useful adherence" where a short package shelf life is involved. If however, a much longer shelf life of the package to be labeled is involved, a better and longer lasting bond is required and under test procedure we classify this as "ideal adherence". As an example a cake can be safely and successfully wrapped and labeled with "useful adherence" whereas a cellophane wrapped package of biscuits would require, because of its long shelf life, "ideal adherence".

II. *Thermo-Kote CM-1*—Also a de-

KIMBLE

CUSTOM-BUILT MOTORS



STANDARD OF PERFECTION IN THE GRAPHIC ARTS INDUSTRY FOR NEARLY A HALF CENTURY

KIMBLE ELECTRIC

Division of Miehle Printing Press & Mfg. Co.

2858 MT. PLEASANT STREET

BURLINGTON, IOWA

DISTRIBUTED BY AMERICAN TYPE FOUNDERS

BEVERIDGE

is the answer to your every mat need

From the standpoint of both service and quality, BEVERIDGE can supply the answer to your mat requirements. This has been made possible by tremendously increased mat production facilities.

New Products Division

The Beveridge Paper Company

Indianapolis 4, Indiana

CLEAN and GRAPHITE SPACEBANDS MECHANICALLY!

SOFNAS SPACEBAND CLEANING MACHINE

- **Cleans entire length of spaceband.**
- **Saves energy and the matrices.**
- **The ease made possible encourages cleaning spacebands as often as standard practice requires.**
- **Cleans six spacebands at a time thoroughly and safely by the undisputed principle employed in the hand method, with the added advantage of mechanical uniformity.**

SOFNAS BROS.

45 Hendricks Place **P. O. Box 5227**

Indianapolis 1, Ind.

SHRINK-O-MATIC

$750 f.o.b L.A.

- Automatic controlled shrinkage
- Matrix automatically ejected
- Time range to three minutes in seconds
- Heat range 200° to 500°
- Requires no attention, watching
- Standard electrical equipment built in
- Automatic starting of time cycle

No Bells • No Horns • No Buzzers

LOW IN PRICE — EARLY DELIVERY

A PRODUCT OF

Platemakers **EQUIPMENT CO.**

7730 MAIE AVENUE • LOS ANGELES 1, CALIF.

DEALER INQUIRIES INVITED

Printing Profits from Planning

Profits and progress inevitably result from carefully detailed planning and experienced engineering, as proved conclusively by our thirty years devoted to the development of dividend-earning procedures for leaders in the graphic arts industries.

Whether you need a new plant or rehabilitation and modernization of present facilities, our complete analysis and factual report will define your needs.

ASK OUR CLIENTS ABOUT US . . . ASK US ABOUT OUR CLIENTS

MORTON L. PEREIRA and Associates
Engineers • Architects
100 West Monroe Building
Chicago 3

layed action waterproof thermoplastic paper, activated by heat and then applied under pressure. Most people think of all thermoplastic labels as being waterproof, but actual test proves this to be anything but fact. The average thermoplastic label will float free after a few minutes immersion in water. As a standard for waterproof qualities we require a two months' seasoning at 70 deg. F. 40% relative humidity followed by a week's immersion in water at 50 deg. F. If the label is still firm after one full week we consider it to be waterproof.

III. *Thermo-Stix PGM*—A thermoplastic paper, activated and applied with combined heat and pressure, originally designed for end and top labeling, but having a wide range of industrial users.

IV. *Thermo-Stix PA*—A thermoplastic paper, activated and applied with combined heat and pressure, primarily designed for binding, staying and joining, where maximum tackiness is required to withstand strain immediately after application.

V. *Thermo-Tak*—Thermoplastic paper activated and applied with combined heat and pressure primarily designed for labeling textiles.

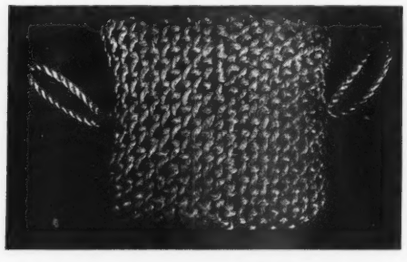
In conclusion I wish to tell you what our experience has been with regard to the printing of thermoplastic labels. The various types of adhesive formulations that we have developed can be applied to any of the ordinary papers currently in use in the Graphic Arts industry. At the moment we have limitations with regard to weight. We are not prepared to apply our thermoplastic adhesive coatings to weights below 40 lb. 25x38-500. Because of production difficulties we have not yet successfully commercially produced thermoplastic coated paper backed aluminum foil. Any of these papers with these various formulations can be printed by any of the ordinary printing processes wherein no heat is used. This obviates the use of spirit varnishes but press varnishes have been used in their place with full satisfaction. It has also been found that the thermoplastic coated side of the sheet can also be satisfactorily printed. This is valuable for the look-through type of label which is used so commonly in the drug field.

The Royle Router

- A large table mounted on a rigidly constructed column.
- Convenient alignment and tightening of driving belts.
- Running parts designed to reduce vibration.
- Sufficient speed at cutter edge to route fine or rough out without reducing speed.
- Precisely fulcrumed elevating mechanism assures immediate reaction to pressure on the foot pedal.
- Changing cutter heads a matter of seconds.
- Speed and balance are built into Royle Routers.

JOHN ROYLE & SONS
Established 1855
10 Essex Street Paterson 3, N. J.

NEWSPRINT BUMPING PADS



ONE SIZE ONLY 18″ x 18″ x 9″

These bumping pads act as safety cushions under newsprint rolls; facilitate handling and eliminate cracked rolls and dogeared edges.

Price $12

AMERICAN PUBLISHERS SUPPLY, Inc.
P.O. BOX 924 LYNN, MASSACHUSETTS

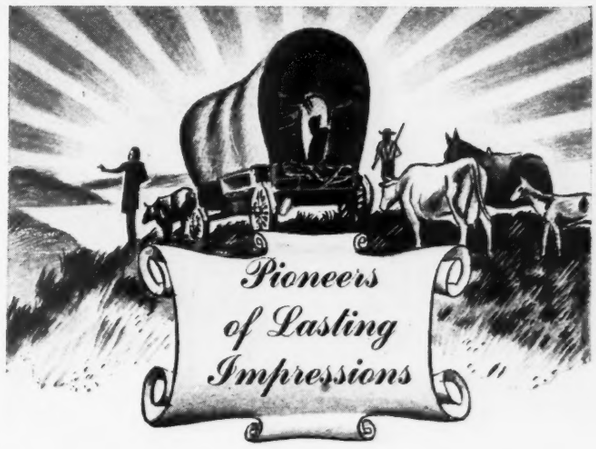
Catalog cover printed in full color by Wallace-Homestead Company, Des Moines, Iowa, for Russell-Heckle Seed Company, Memphis, Tennessee

Produced with the help of
Cromwell *Special Prepared* **Tympan**

. . . not the *corn*, but its lifelike reproduction, was produced with the aid of CROMWELL *Special Prepared* TYMPAN. The hard, uniform surface, calipered uniformity and high tensile strength of Cromwell Tympan *never* varies. That's why printers all over the world rely upon it implicitly for the production of fine printed pieces. Cromwell Special Prepared Tympan is, as always, unconditionally guaranteed. Try it before you buy it . . . write for FREE working sample, giving size and make of press.

. . . as always, unconditionally guaranteed

The CROMWELL PAPER COMPANY
4801-39 S. WHIPPLE ST., CHICAGO 32, ILL.



Hardy pioneers, cast in the mold of men like Daniel Boone, hewed the highways of progress through America's wilderness. Wood, pioneers of the dry mat, today make a product held high in the esteem of craftsmen who demand the finest in stereotyping reproduction.

Sample Mats Sent Free Upon Request

WOOD FLONG CORP.
Oldest In The Country — First In The Field
HOOSICK FALLS · NEW YORK
New York City Office: 551 Fifth Ave., New York 17, N. Y.

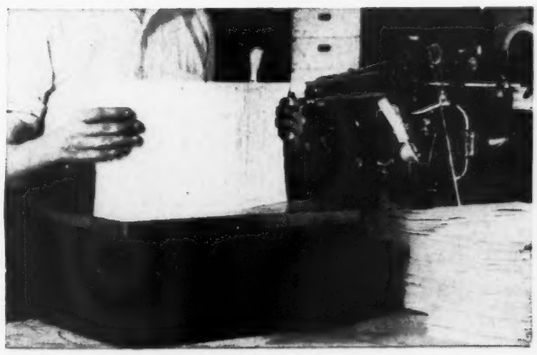
SYNTRON
"VIBRATING"
PAPER JOGGERS

Can Save You Time and Money

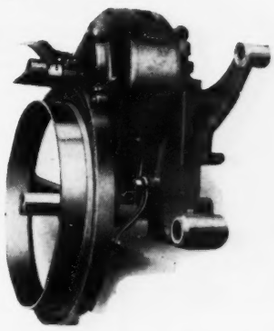
—by speeding up jogging operations 3 to 4 times—on all types of stock, from onionskin to heavy board.

Write for illustrated folder

SYNTRON CO., 577 Lexington, Homer City, Pa.



The
CUSHMAN *offset* **MOTOR**
is synonymous with
QUALITY



. . . Proud New England craftsmanship makes its sturdy dependability.

Immediate Delivery

CUSHMAN MOTOR DIVISION

PRECISION
TRADE ★ MARK
LINOTYPE PARTS COMPANY
Factory and Main Office
SOUTH HACKENSACK, N. J.
Branch Office: 1327 BROADWAY, KANSAS CITY 6, MO.
CHICAGO · MINNEAPOLIS · DENVER

Write...for catalog to help choose your Proving Equipment

VANDERCOOK PRE-PRESS EQUIPMENT

VANDERCOOK & SONS, INC.
900 N. Kilpatrick Ave., Chicago 51, Ill.

WISE Buys

2 Model K Linotypes, Rebuilt and guaranteed.

1 Model 8 Linotype, 3 magazines, 3 molds, AC motor, completely re-conditioned, guaranteed.

25 x 38 Premier Cylinder Press, rebuilt.

90-Channel Linotype Magazines, New.

Monotype Caster, strip material attachment, 3 new adjustable molds, casts up to 36 pt. inclusive, factory re-built.

2 Kelly Automatic Jobbers, one with extension delivery, re-conditioned.

38" Acme Power Paper Cutter.

24, 30 and 48 Pt. VOGUE BOLD COND. Caps and lc, for 72-Channel, New.

50 fonts, slightly used mats. Ask for mat list.

William J. Wise
Printing Machinery & Supplies
32 Blvd. of Allies
PITTSBURGH 22, PA.

NEW and USED

NEWSPAPER PRESSES
PRINTING EQUIPMENT

BEN SHULMAN
500 FIFTH AVENUE
NEW YORK 18, N. Y.
BRyant 9-1133

Do You Use a Dummy?

(Continued from Page 32)

for news and other features of the paper apart from advertising.

After the managing editor has gone over the dummy he takes it to the telegraph editor who begins to rip it apart. He then proceeds to distribute the various pages to the proper departments such as Women's Department, Sports, Local (City Editor), State Editor and Telegraph Editor. In that way each separate department of the Editorial Room gets its pages of the dummy so that the head of each of these departments knows how much space he has to take care of for the coming issue.

With each department of the Editorial Room in possession of the pages of the dummy on which its copy is to be run, the head of each department begins to mark up the dummy, indicating individual stories, cuts and whatever else that goes on its pages. In that way each page is completed as a dummy in the department in charge of that part of the paper.

Both the daily issues and the Sunday issue are put out in five editions starting with the Bulldog edition that goes to press at 7 in the evening which is followed by what is known as the Binghamton edition at 7:45. Then comes the Wilkes-Barre edition at 9:30 p.m. with the Carbondale edition at 10:30 p.m. The final edition goes to bed at 1 o'clock in the morning.

So the composing room will know what news matter to pull from the final edition of the day before to fill up the local news pages, the city editor informs the Composing Room what pages devoted to local news will be filled with new live news. In this way the Composing Room will know what to pull out of the last edition of the previous day to complete the pages.

The early sports copy reader dummies up the sports page for the Bulldog edition. The sports editor comes on at 4 o'clock in the afternoon and dummies up the sports pages for the other editions. The society or women's page editor dummies up her pages for the first edition and that dummy stands for the entire run of editions. The telegraph editor dummies up pages 1 and 2 for the Bulldog edition and after that has gone to bed he dummies up the same pages for the first regular edition. This dummy stands for all other editions except where changes must be made for late stories, new developments or some changes in stories.

The city editor dummies up the pages on which city news runs and then dummies up the same pages for the first regular edition which dummy stands for the other editions unless news developments make changes necessary. Such changes, however, are never very great.

REVIEWS SECONDARY METALS POSITION

BY PAUL HERZOG*

*General Manager, Scrap Purchasing Dept., Federated Metals Div., American Smelting and Refining Co. Abstracted from address before Lead Industries Association, New York, March 1948.

LEAD made from secondary or reclaimed metals accounts for almost 40 per cent of the supply required in the United States," said Herzog. He further stated, "More than 90 per cent of the scrap lead supplies come to the smelter from the scrap dealer and less than 10 per cent directly from industry, and more than one-half of all scrap lead consists of battery plates. In fact, according to U. S. Bureau of Mines statistics, in 1947 battery plates accounted for 60% of all scrap supplies. This was an all-time high but previous years still show this source was 50 per cent to 55 per cent of the total.

There are today some 4,200 dealers throughout the U. S. A. engaged in collecting and breaking up battery plates and of these, some 1,200 dealers are regular truck or carload shippers to the smelter. To the dealers as a whole, battery plates represent tonnagewise *the* No. 1 scrap item on the list, outranging by far any other non-ferrous grade of scrap. For 1947, smelters report total receipts of 382,000 T. of battery plates, while the next item in dealers' tonnage is copper scrap, which probably did not amount to more than 120,000 T. or ⅓ of the tonnage of battery plates.

Klingrose Machine Corporation
150-20th STREET, BROOKLYN 32, N. Y.
MANUFACTURERS OF
Roto Gravure Printing Presses

CLASSIFIED ADS ALL CLASSIFICATIONS

$.75 per line 1.9/16" wide. Minimum ad 5 lines, 25 characters per line. Cash with order.

CLOSING DATE—15th of Month preceeding Date of Issue.

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

FOR SALE

In good working condition, inspection by appointment, price upon application, f.o.b. car or truck Dayton, Ohio, the following:

1—Ostrander Seymour curved router for stereotype plates
1—18½ in. Wesel metal melting pot
1—28 in. Wesel metal melting pot
1—20 in. Rotary plate casting box
1—20 in. Plate shaver
1—11½ in. x 18 in. Flat plate casting box
1—16 in. Rotary plate casting box
1—17 in. Rotary diamond plate casting box
1—33 in. Curved rotary plate router
1—17 in. plate shaver
1—W. Field flat metal plate rougher

The Egry Register Company
Dayton, Ohio

WANTED: Job compositor. Goss stereotype press knowledge would help. Two weeks vacation with pay after first year. Write or wire Fostoria Daily Review-Times, Fostoria, Ohio.

WANTED: Make-up man. 8 to 16 page daily newspaper, stereotype press. 40 hour week with over time pay, two weeks with paid vacation after first year. Aetna Insurance, good town, fine schools and churches. Middle-aged married man with or without children. Linotype experience not needed, but could use. Can get house. Write or wire Fostoria Daily Review-Times, Fostoria, Ohio.

FOR SALE

Hoe Curved Hand Casting Box 22¾ cut off, has had about five years use. Hoe finishing machine complete with motor, air and water attachments. Five ton Hoe Metal Pot. All in first class condition. Delivery in April. Journal-Tribune Publishing Co., Sioux City, Iowa.

ADMINISTRATION OR PRODUCTION ASSISTANT

Young man with experience in printing. Has B.S. and M. S. in industrial engineering. Reply Box 302. Printing Equipment Engineer.

Try
P-Double-E's
Classified
Ads

SAFETY·RELIABILITY·ECONOMY
CLINE
PRESS DRIVES and CONTROL
Reels, Tensions and Pasters...
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 400 West Madison St.
New York: 220 East 42nd Street
San Francisco: 410 Bush Street

★ STAR CUT CEMENT ★
Since 1936 — For Mounting — Since 1936
CUTS...STEREOTYPES...ELECTROTYPES
65c per tube-$5.50 per doz. $5.00 per doz. in two doz. lots, $4.50 per doz. in gross lots.
★ STAR CEMENT COMPANY ★
45 Malone Avenue, BELLEVILLE 9, N. J.

RICHARDS Since 1900
KALAMAZOO, 13F
Saw-Trimmers, Flat and Curved Plate Routers, Stereotype Saws and Mortisers, Steel Rule Dies.
The most complete line built. See our page ad July issue or ask for catalog.

REID MAGAZINE RACKS
FOR LINOTYPE AND INTERTYPE
Also New and Used Motor Drives
Order from
William Reid Co., 2271 Clybourn, Chicago 14, Ill.
Why the cow jumped over the moon—they did not have a new Reid milking machine.

LETTERPRESS • ROTOGRAVURE • OFFSET
ANALINE • WEB-DRYING-APPARATUS
B. OFFEN & CO.
343 So. Dearborn Street Chicago 4, Illinois

100% AUTOMATIC SLUG SAWING
Odd measure slugs sawed to any measure as ejected from line-casting machine. Fast-accurate-economical.
MOHR SAW
MOHR LINO-SAW CO.
128 N. Union St. Chicago

BAUM FOLDERS
RUSSELL ERNEST BAUM
615 Chestnut Street Philadelphia, Pennsylvania

SYNTHOX ROLLERS Ideal
Best in the long run—proved in service!
Synthox rollers distribute moisture-set and linseed base inks smoothly and efficiently; special formulas for special purposes. Popular on large rotaries as well as on smaller, high-speed presses. Easily used and easily cleaned.
IDEAL ROLLER & MANUFACTURING CO. Chicago 8, Illinois Long Island City 1, N.Y.

For Accurate Routing

USE THE

NOLAN

Radial Router

Save money. Write for complete information on this inexpensive radial router.

EASY MONTHLY INSTALLMENTS

NOLAN CORPORATION
1331 East Dominick St.
ROME, NEW YORK

Manufacturers of Finest Quality Printing Equipment

NEWSPAPER & PRINTING PLANT ENGINEERING

NEW BUILDINGS • MODERNIZATION
SURVEYS • CONSULTATION

ROBERT W. DICKERSON
2063 EAST 4TH STREET • CLEVELAND 15, OHIO

The state editor dummies up for the first regular edition, the state stories for the Bulldog edition being picked up from the last edition of the previous day.

For the Sunday *Scrantonian* the plan works out a bit differently. On Friday night the managing editor gets a dummy but it is not complete. All of the pages are not complete or in the dummy. However, on Saturday morning the complete dummy is delivered to the managing editor by the advertising department. The dummy is then broken up as before and distributed to each editorial department. And the dummying up process is carried on in much the same manner except that for the Sunday paper Sports and Society have a whole section instead of only pages as with the weekly editions.

This complete dummying plan has been used for some time by these newspapers and has worked out with complete satisfaction. In dummying up the editions the advertising department aims at an attractive page as a unit so that it places ads on the same page that do not show too wide variation in type styles. Where advertising must have a preferred position care is used to see that there is some harmony between the various ads insofar as type styles are concerned. And in dummying up the news matter, the overall appearance of the page is the objective that is held in mind, seeking to give it a complete appearance along with proper balance both as to form and type styles.

In the Composing Room the dummy idea for every issue is most welcome because it saves lots of gripes that might otherwise result because of dissatisfaction over makeup. If some advertiser doesn't like the position his ad was given nobody can blame the Composing Room because the men in the Composing Room put the ad where it was dummied to go. And if some bigwig in the city government kicks about the place his story was run nobody can pass the buck to the Composing Room Superintendent because the story was dummied up in the Editorial Room. Besides all this, the complete dummy idea makes the making-up of the forms in the Composing Room very much easier. Nobody has to worry where anything goes, which, after all, is not within the province of the printer. All the men in the Composing Room have to do is to follow the dummy and their life runs on with complete happiness.

After a day's editions have been run, the dummy for that day's editions is filed in the Composing Room for one month, after which it is destroyed.

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SNAP-SET

NEW MIRACLE INK

- Dries on paper instantly
- Can be backed up immediately
- Will not dry on press
- Saves wash-ups
- Will not "skin" in can—no waste

Available in all colors

"Boy, I've never seen the match of Snap-Set for speed and quick drying on paper."

This cover is printed with Snap-Set Orange E-6191 and Snap-Set Halftone Black E-4407

"What a relief! Saved me six wash-ups this week."

"What a time-saver! Snap-Set delivers rush-jobs on time."

Howard Flint Ink Company

Printing and Lithographic Inks

DETROIT CHICAGO HOUSTON DENVER ATLANTA
NEW ORLEANS CLEVELAND INDIANAPOLIS LOS ANGELES

Flint Inks

Intertype Presents

ADDITIONS

To Its Type Families

AB abcde 234
30 Pt. Futura Medium

AB abcde 234
30 Pt. Futura Medium Oblique

ABCD abcdefg 123
30 Pt. Futura Medium Condensed

ABC abcdefg 123
30 Pt. Futura Bold Condensed

ABCDEFG abcdefghijkl 123
ABCDEFG abcdefghijkl 123
18 Pt. Futura Bold Cond. with Medium Cond. No. 2

ABCD abcdefghijkl 123
ABCD abcdefghijkl 123
24 Pt. Futura Bold Cond. with Medium Cond. No. 2

ABC abcdefg 234
ABC abcdefg 234
24 Pt. Futura Demibold with Oblique

ABCD abcdefghi 234
ABCD abcdefghi 234
18 Pt. Futura Bold with Oblique

ABC abcde 234
ABC abcde 234
24 Pt. Futura Bold with Oblique

ABabcde234
30 Pt. Futura Demibold Oblique

ABC abcd 123
30 Pt. Bodoni Italic

AB abcde 23
36 Pt. Bodoni Bold Italic No. 2

ABC abcdefg 234
30 Pt. Cairo Condensed

AB abcde 123
36 Pt. Cairo Condensed

ABCD abcdefgh 123
18 Pt. Cairo Bold Italic

ABC abcde 123
24 Pt. Cairo Bold Italic

ABabcde234
30 Pt. Cairo Bold Italic

ABCDEFGHIJKLMNOPQRSTUVWXYZA 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZA 12345
6 Pt. De Luxe Gothic Light Cond. with Med. Cond.

ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEF 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEF 12345
6 Pt. De Luxe Gothic Light Condensed A with Medium Condensed A

ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJK 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJK 12345
6 Pt. De Luxe Gothic Light Condensed B with Medium Condensed B

ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMNOPQR 12345
ABCDEFGHIJKLMNOPQRSTUVWXYZABCDEFGHIJKLMNOPQR 12345
6 Pt. De Luxe Gothic Light Condensed C with Medium Condensed C

ABCDEFGHIJKLMNO abcdefghijklmnopqrstuvwxyz 12345
ABCDEFGHIJKLMNO abcdefghijklmnopqrstuvwxyz 12345
8 Pt. Alternate Gothic No. 1 with Vogue Bold Cond.

ABCDEFGHIJKL abcdefghijklmnopqrstuvwxyz 12345
ABCDEFGHIJKL abcdefghijklmnopqrstuvwxyz 12345
6 Pt. Vogue Bold Dual Alignment

ABCDEF abcdefghijklmnopqrst 12345
ABCDEF abcdefghijklmnopqrst 12345
10 Pt. Vogue with Oblique

ABCDE abcdefghijklmno 12345
ABCDE abcdefghijklmno 12345
12 Pt. Vogue with Oblique

ABCD abcdefghijklm 12345
ABCD abcdefghijklm 12345
14 Pt. Vogue with Oblique

ABCD abcdefghij 123
30 Pt. Vogue Condensed

ABC abcdef 123
36 Pt. Vogue Condensed

ABCDE abcdefghijkl 12345
ABCDE abcdefghijkl 12345
12 Pt. Regal No. 2A with Cairo Bold No. 2

ABCDEF abcdefghijklmnopqrstuv 12345
ABCDEF abcdefghijklmnopqrstuv 12345
8 Pt. Cheltonian Medium with Italic

ABCDEFG abcdefghijklm 123
ABCDEFG abcdefghijklm 123
18 Pt. Cheltonian Bold Extra Condensed with Italic

AB abcde 23
36 Pt. Cheltonian Medium

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